

No. 15

ELEMENTARY SCIENCE NOTE BOOK
PHYSICAL SCIENCE

BY
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TORONTO
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ALL educators recognise that as an essential part of the school course, designed with the object of giving the necessary stimulus to the mind, and with the study of English literature.

and accurate expression of the facts observed. This Note-book has been designed to assist teachers to make this method effective in connection with the study of English literature.

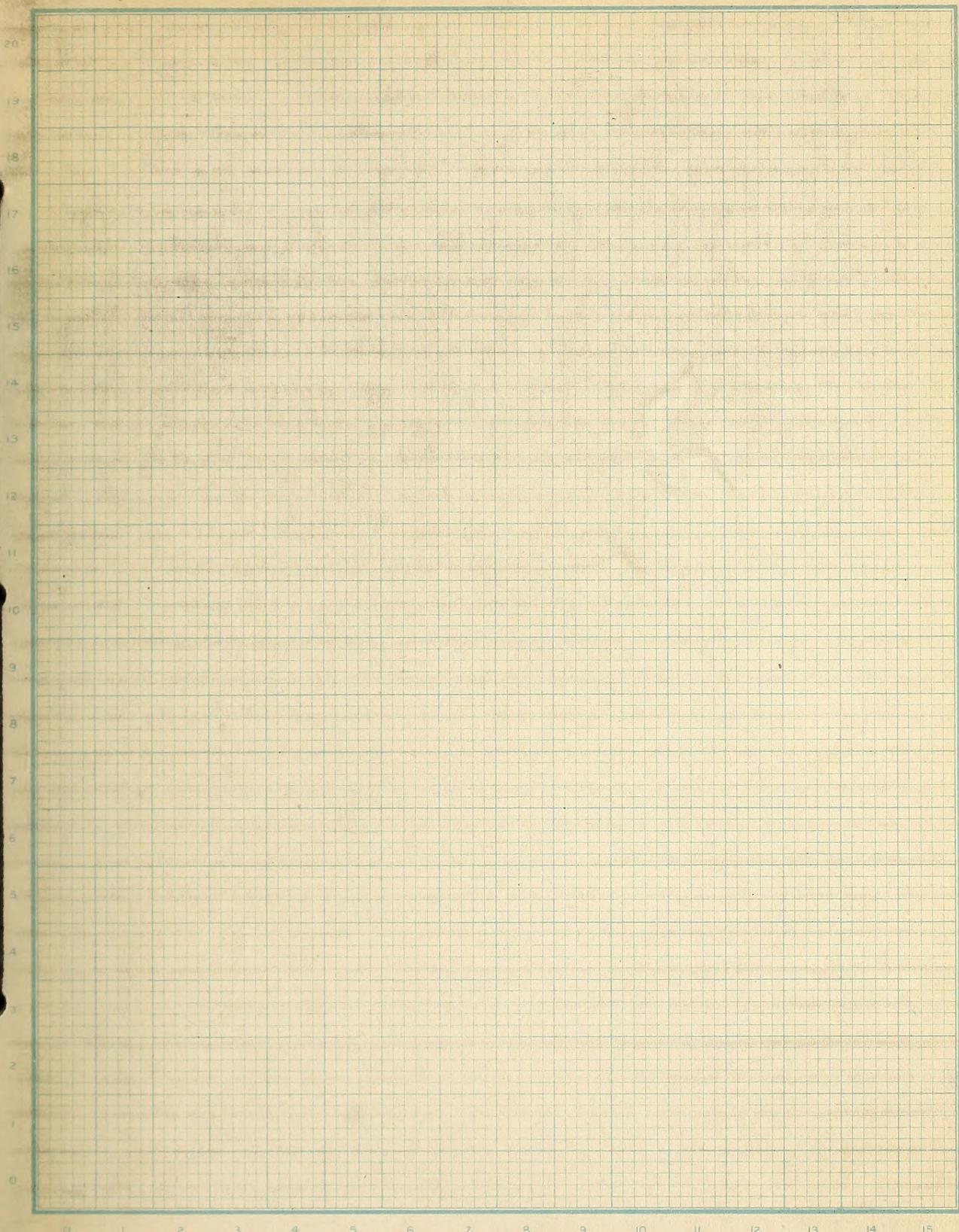
While every good teacher has his own method of procedure and will use the book as his experience directs, yet a few general suggestions may be helpful.

It is customary in writing out descriptions of experimental work to arrange the notes in each experiment in a systematic way under appropriate headings, as the **problem** to be investigated, the **apparatus** used, the **operations** performed, the **observations** made, the **conclusions** or **results** inferred from the observations.

Many topics will be found which do not lend themselves to this classification, but where for the sake of brevity and system it is used, care should be taken that the forms of expression in the descriptions do not become stereotyped and mechanical.

Whatever order in description is adopted, the teacher should insist that the students write out, with proper regard for sentence construction, paragraph arrangement and neatness in penmanship, concise and accurate **original** accounts of the experiments performed, with the facts to be derived from it.

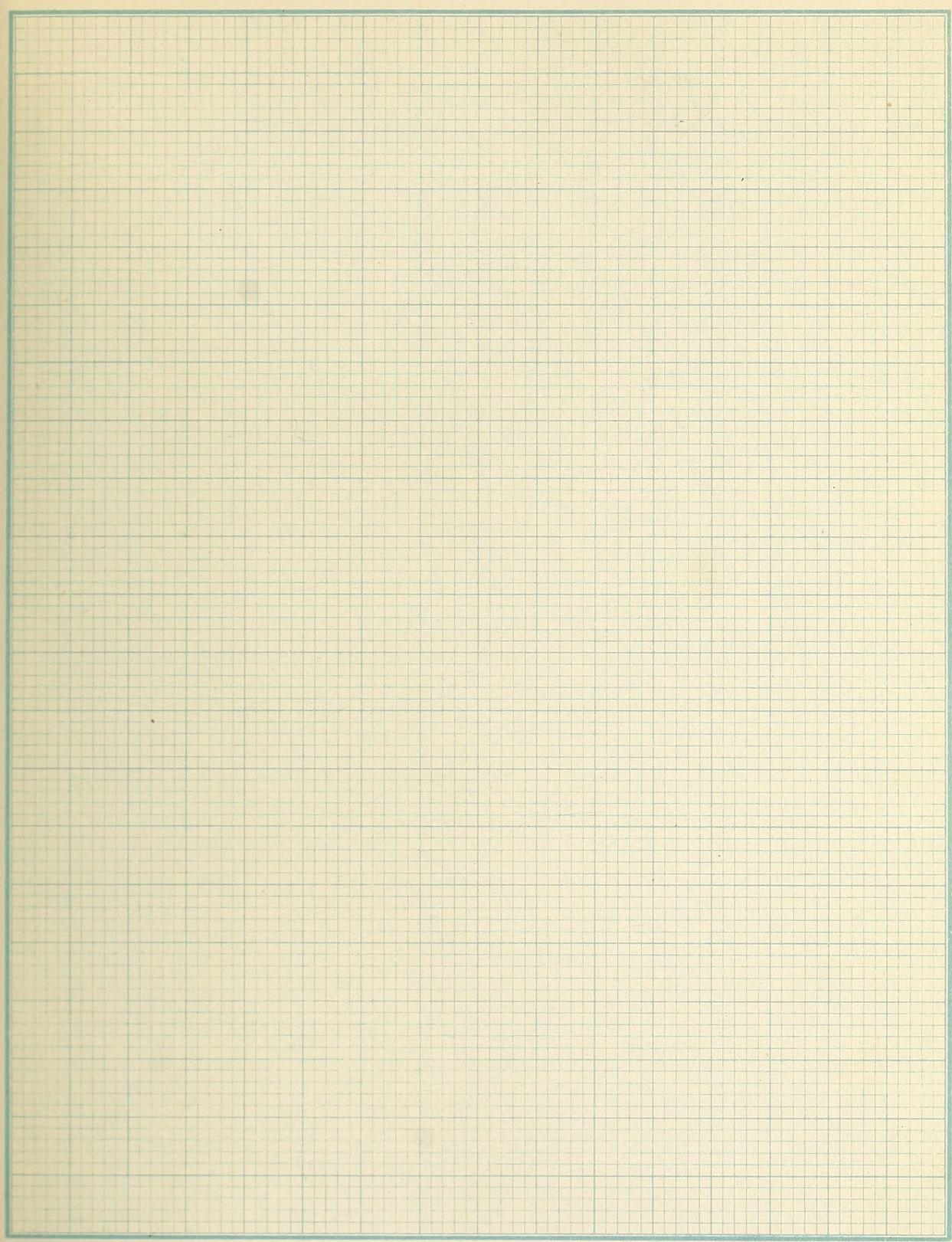
The inexperienced teacher is liable to become discouraged with the meagre and disconnected notes which he will receive from beginners, and is tempted to substitute for these exercises the dictation of clear and explicit notes prepared by himself. This method has the advantage that the students' note-books



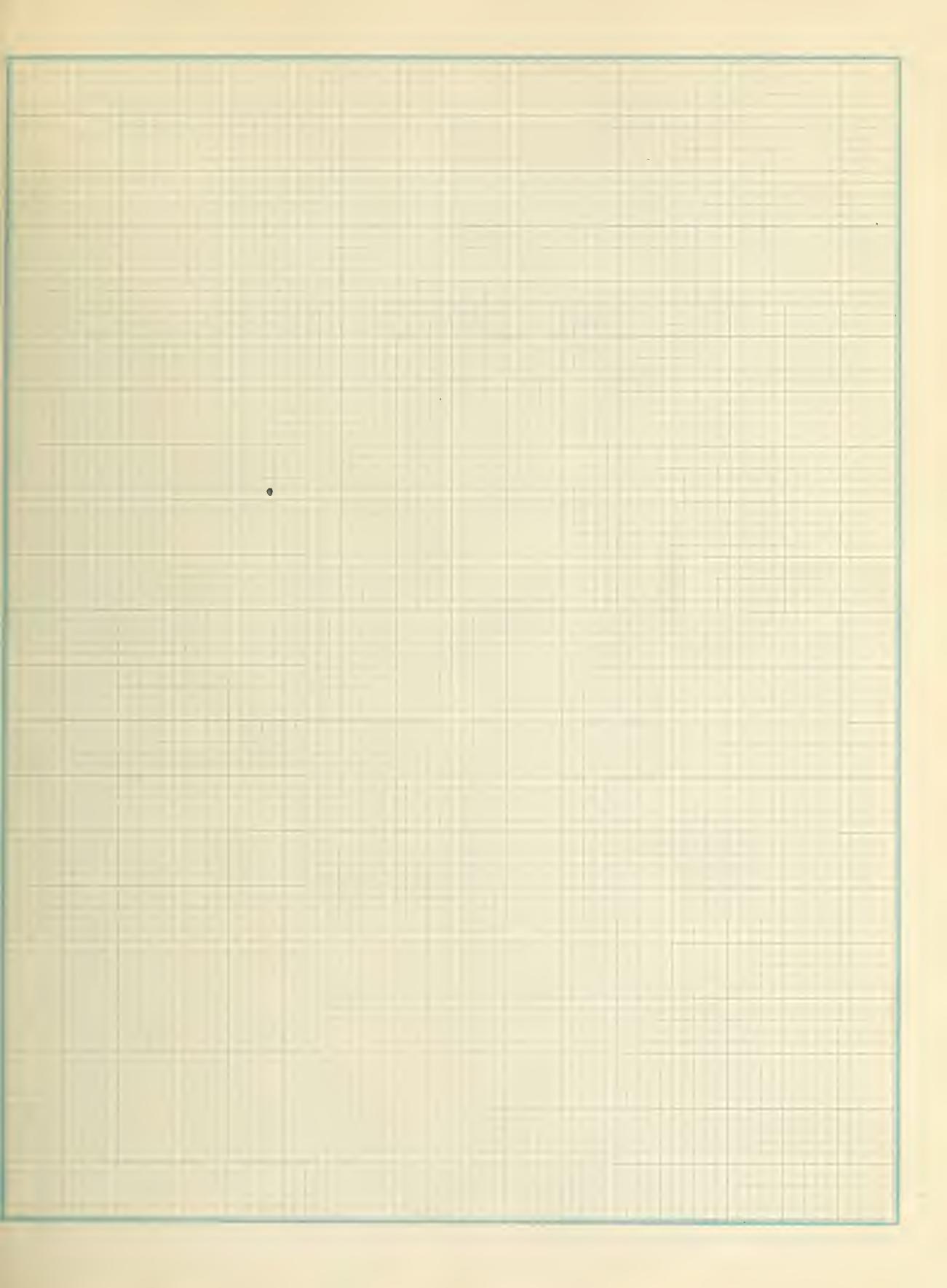


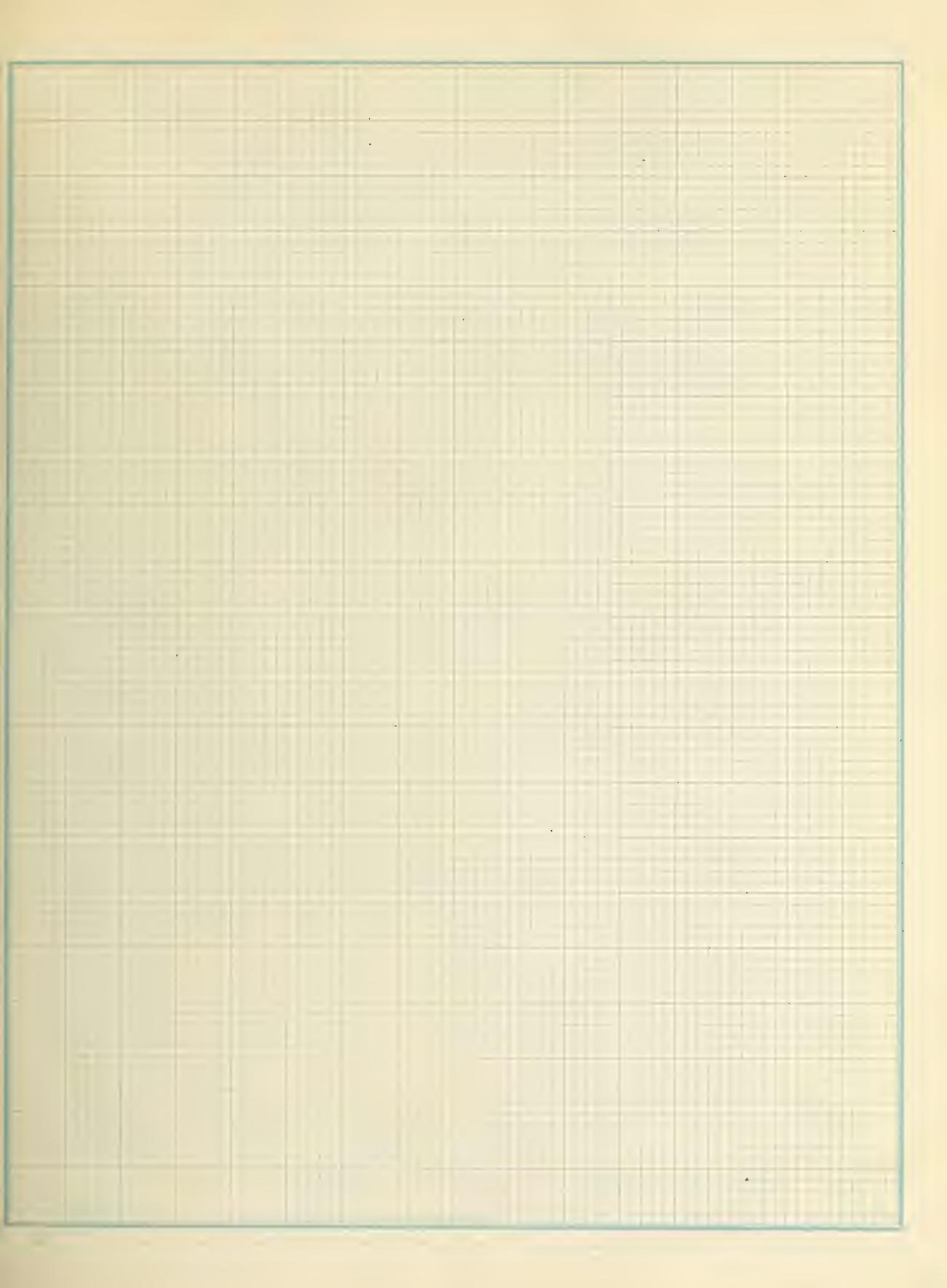
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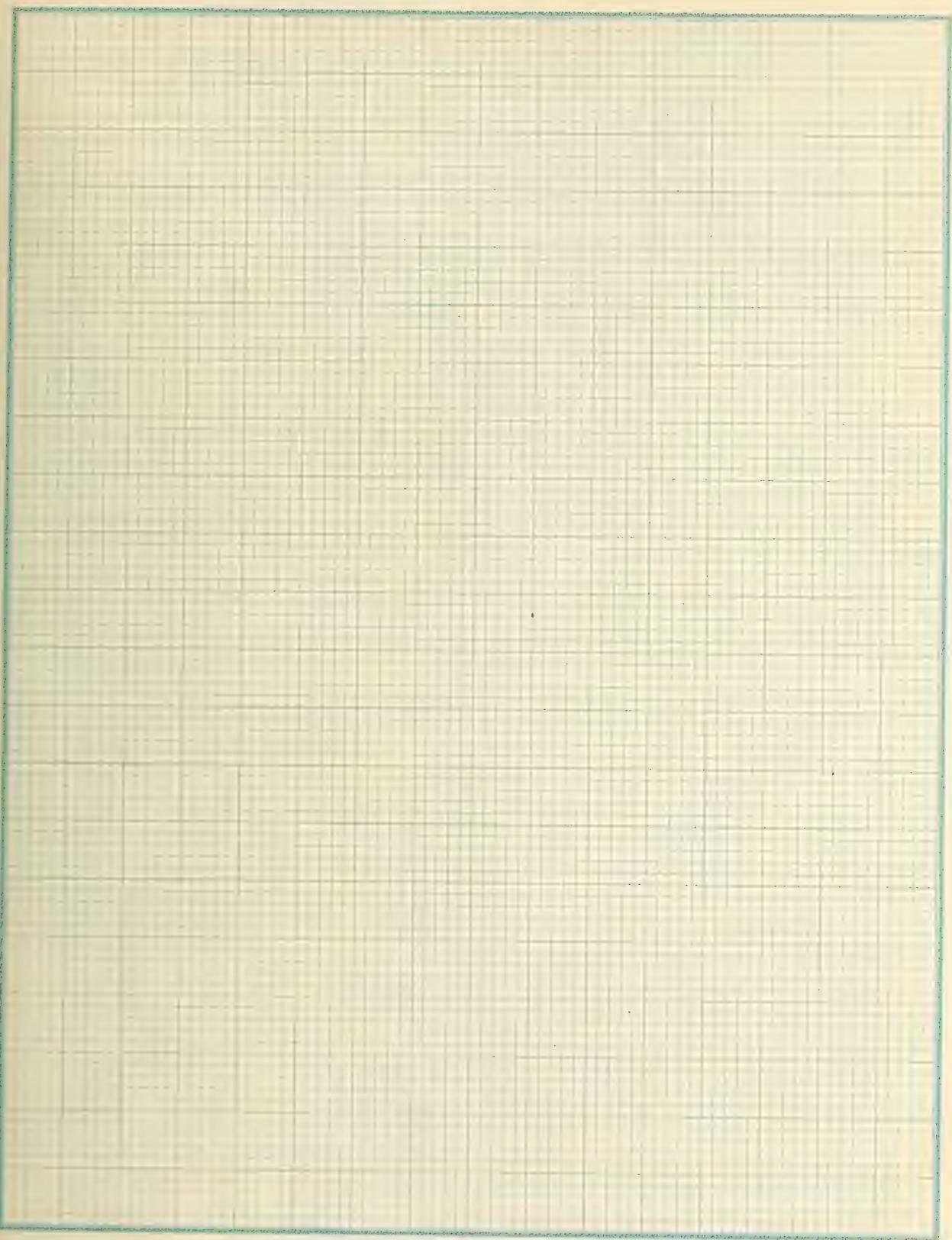
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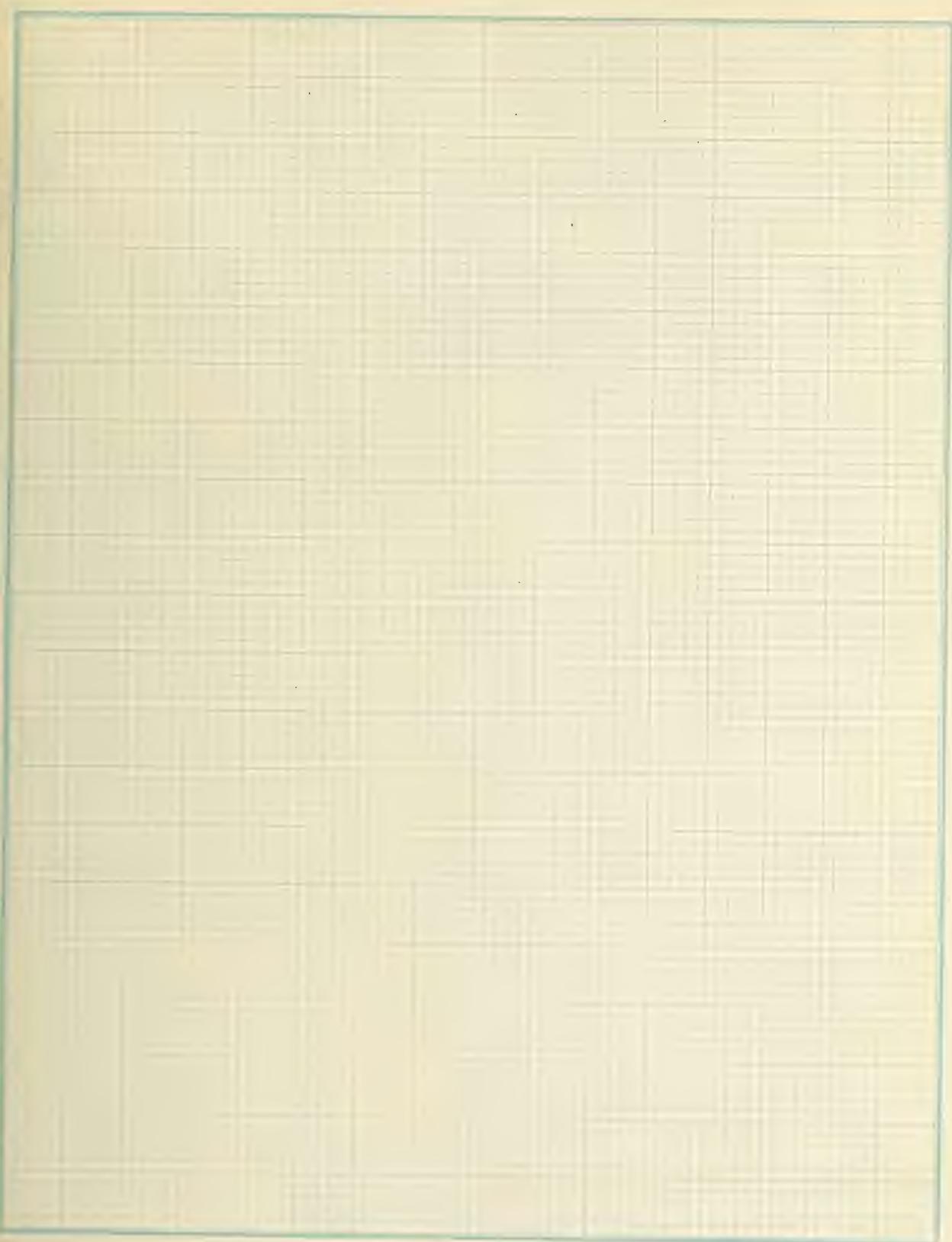


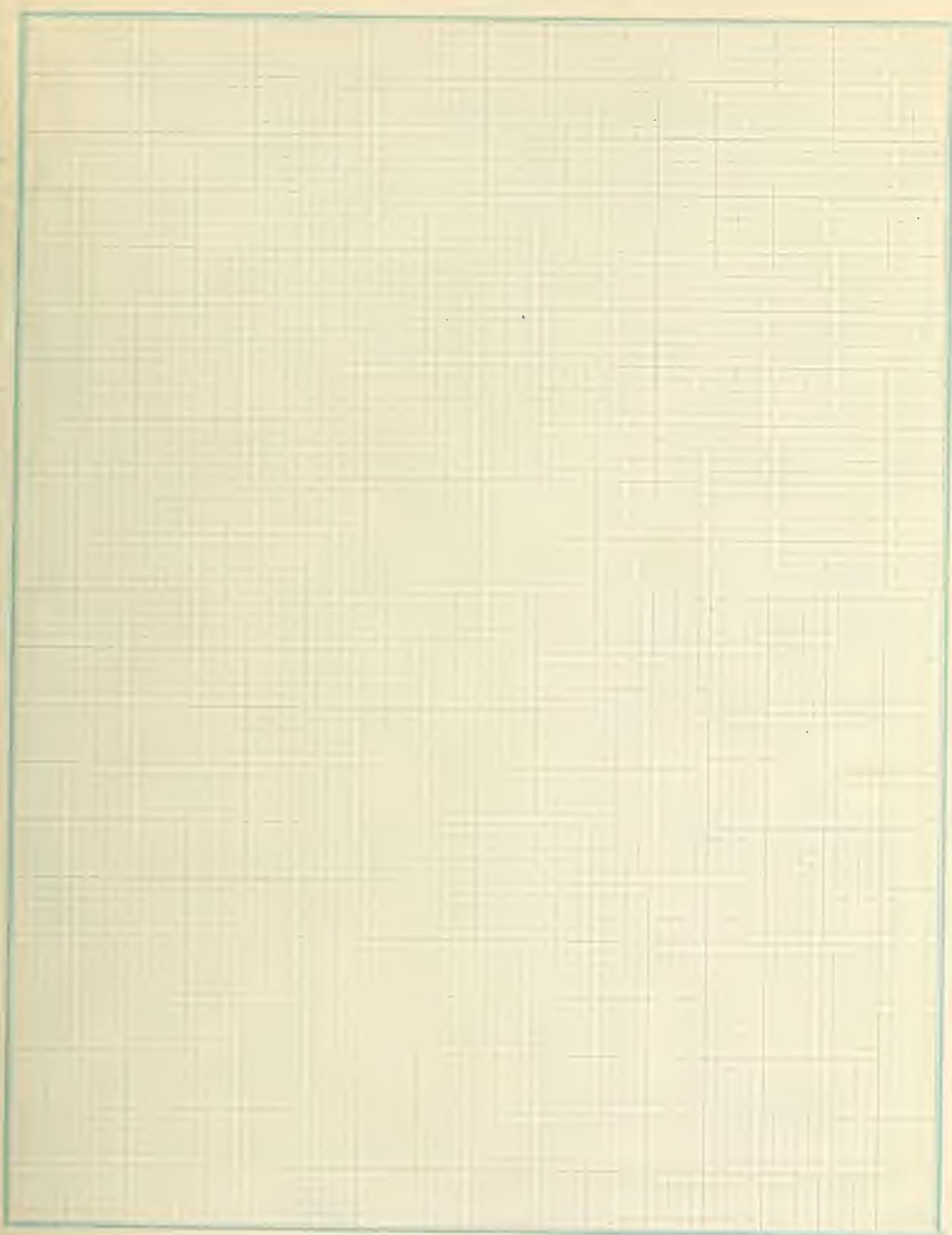
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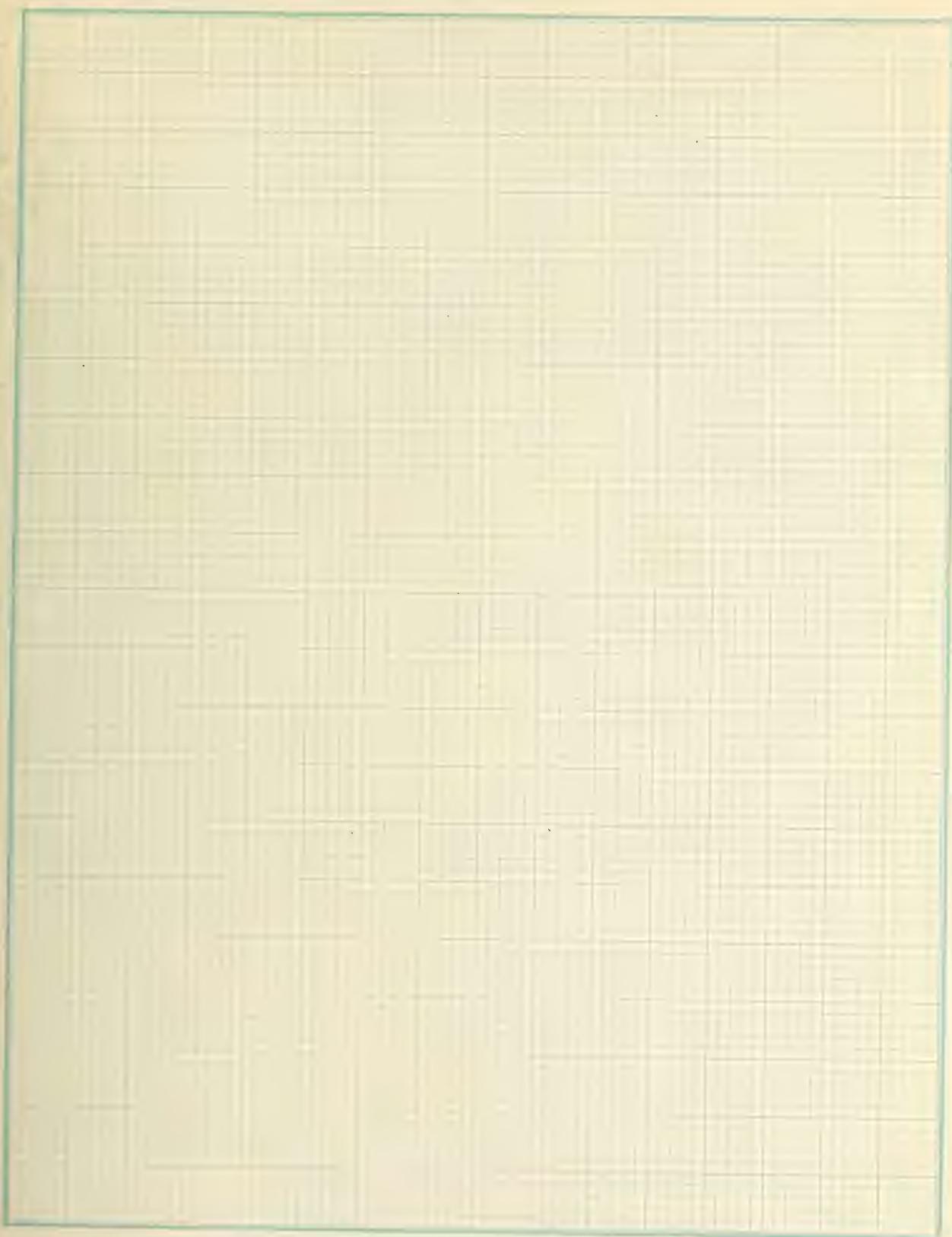


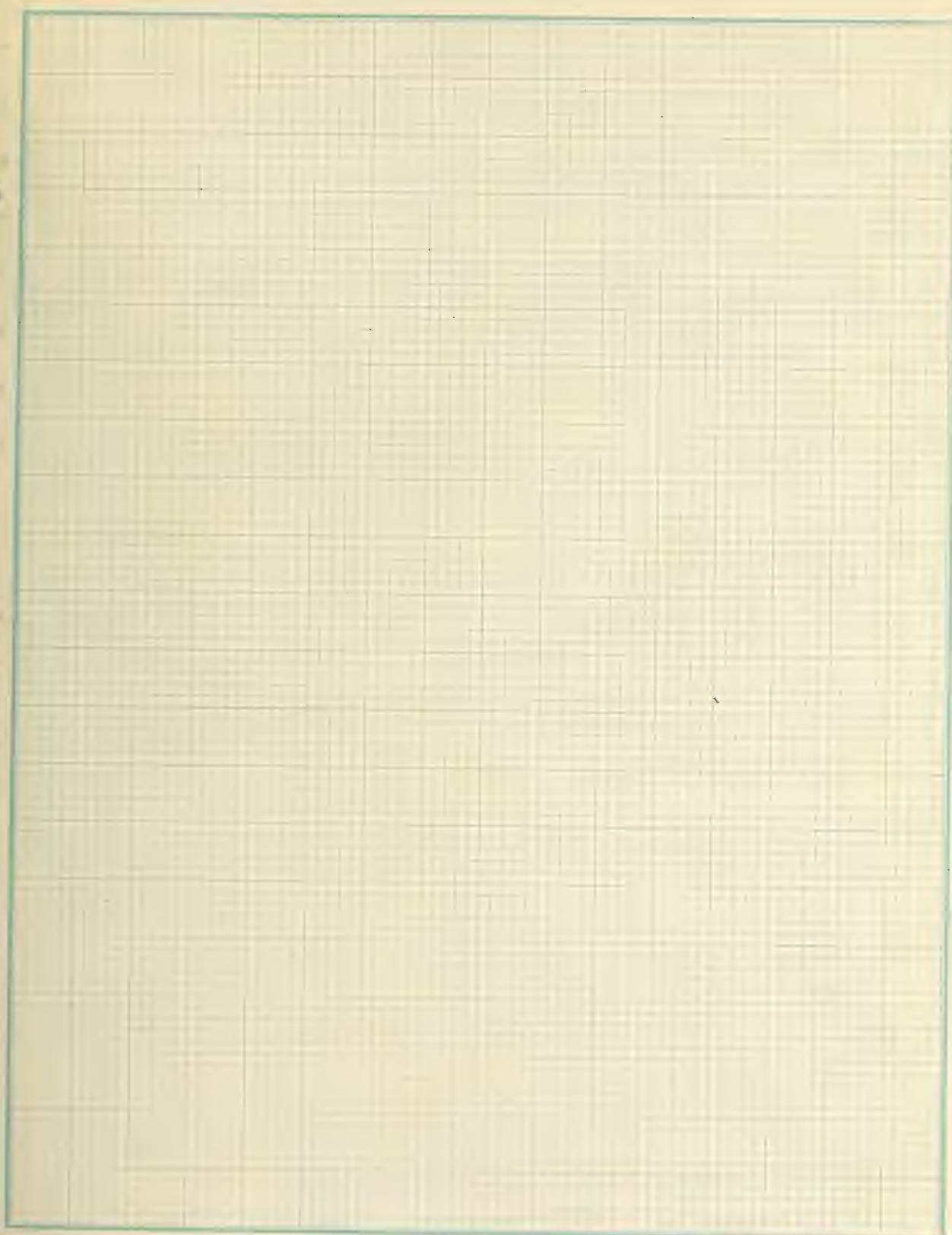


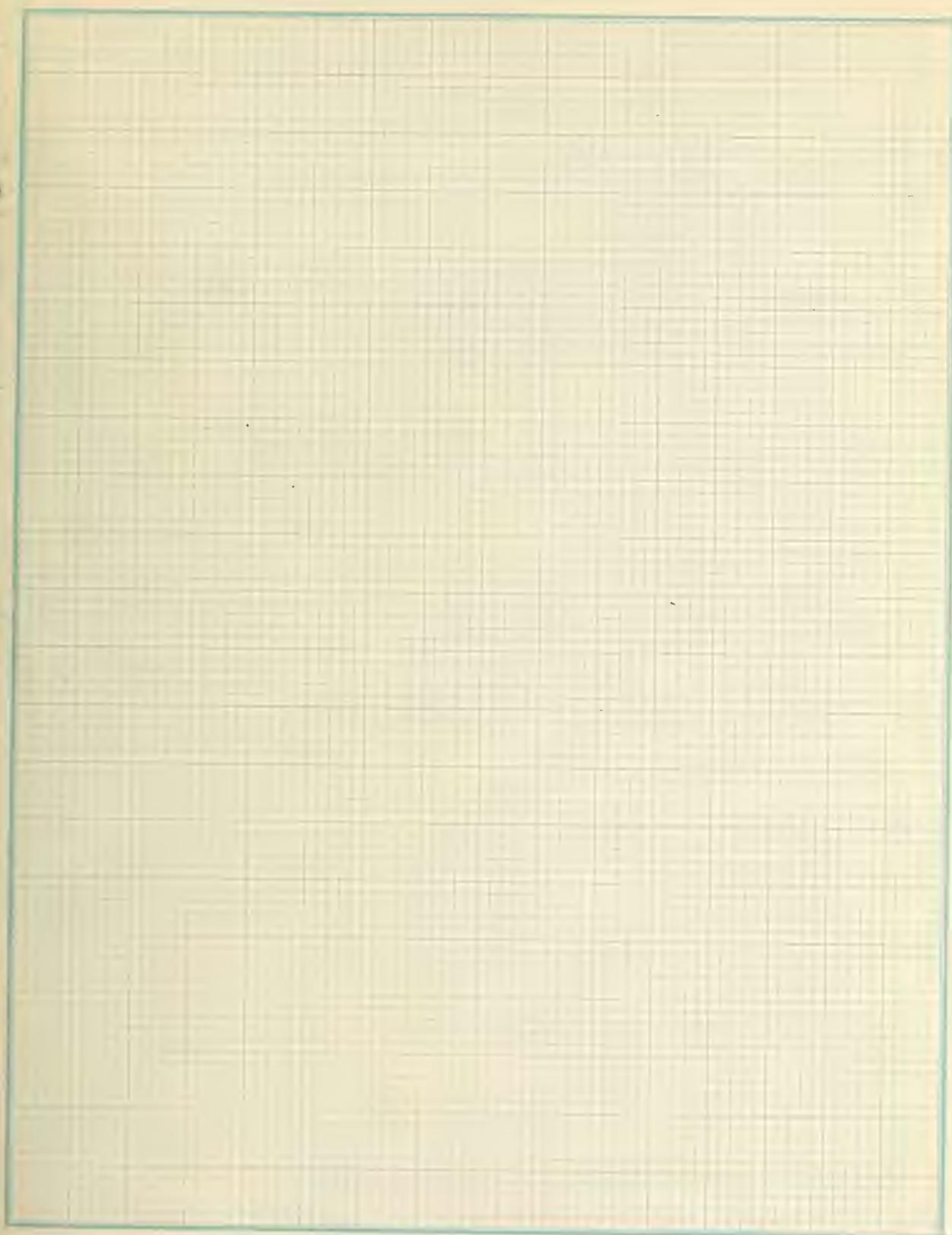


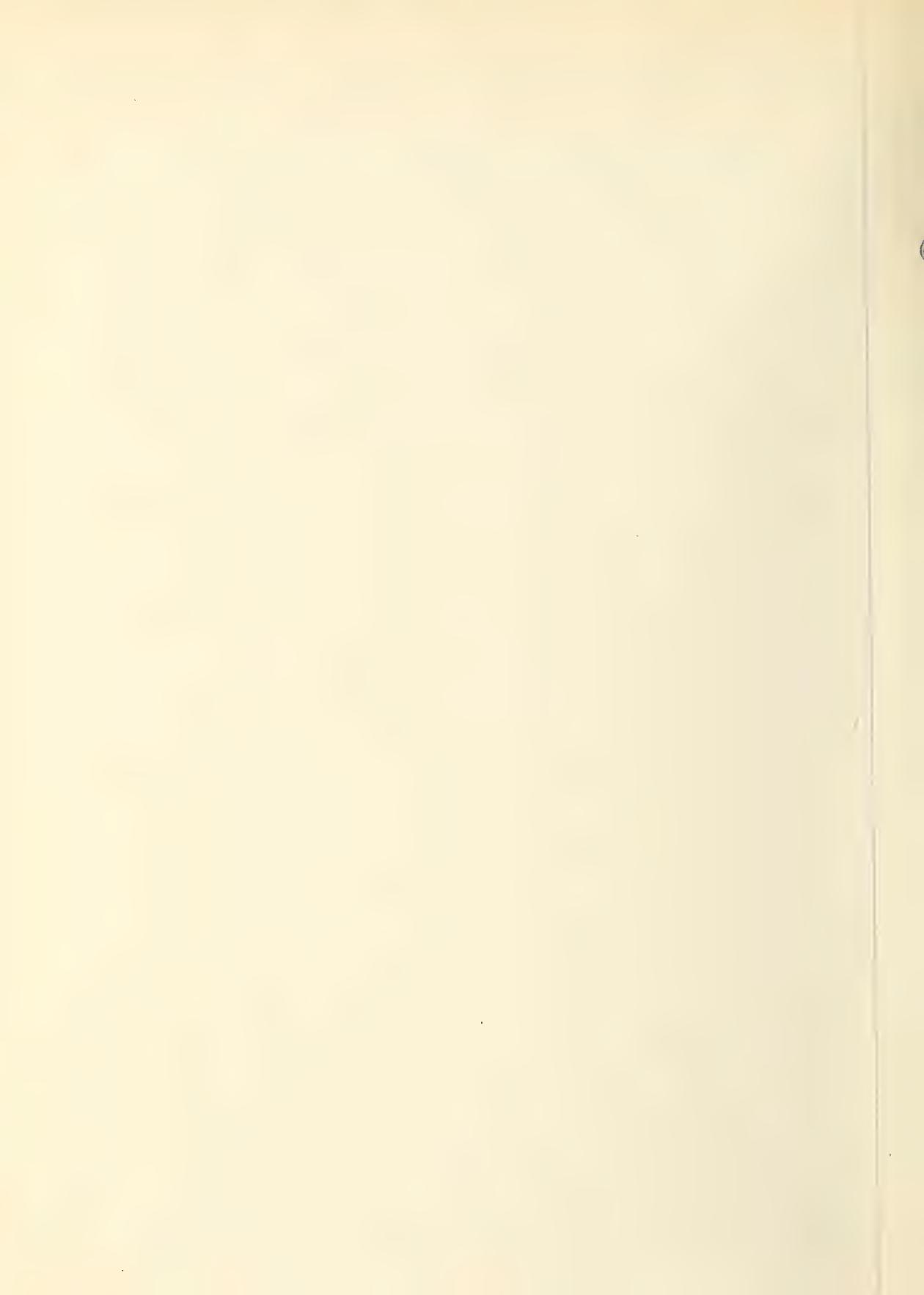


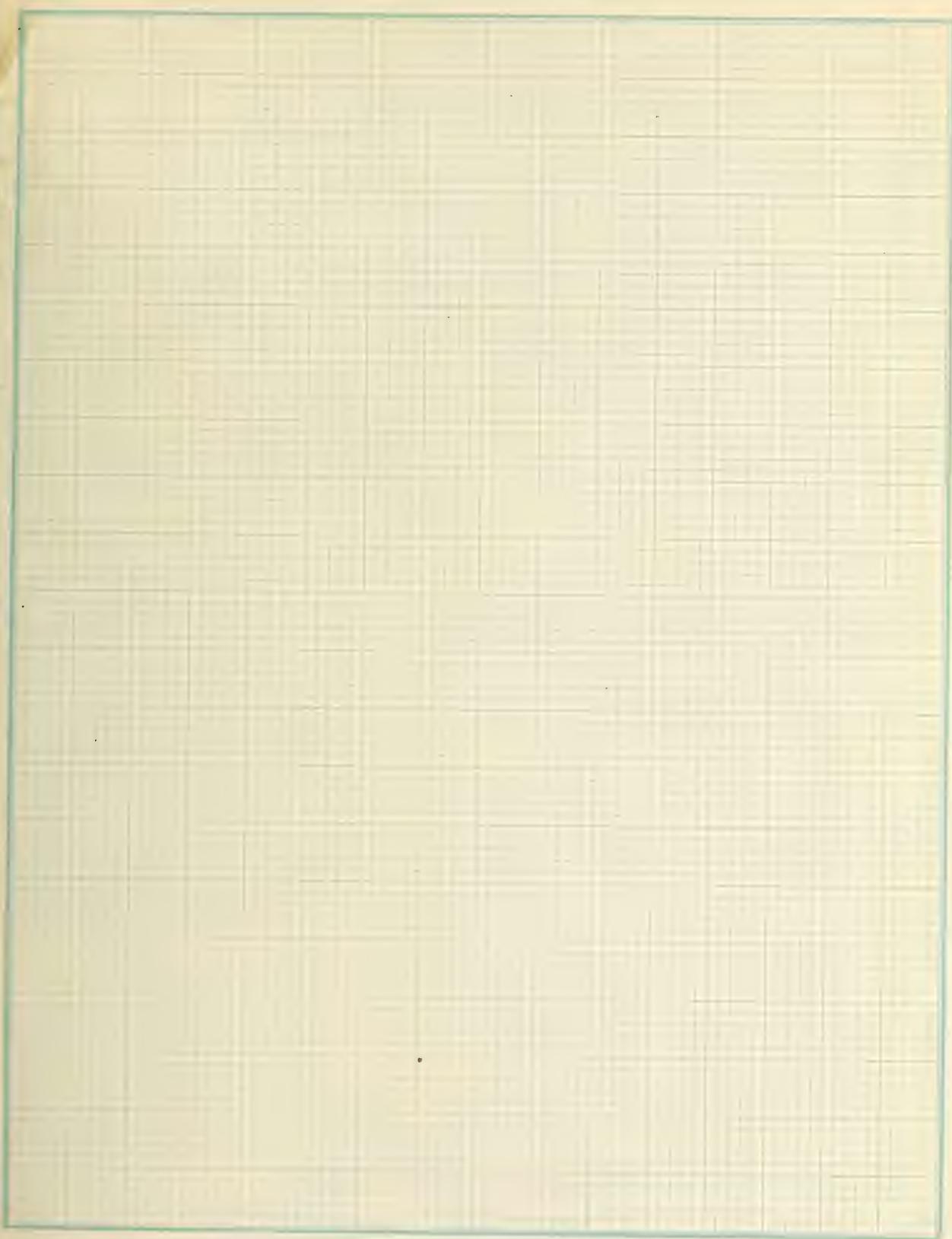


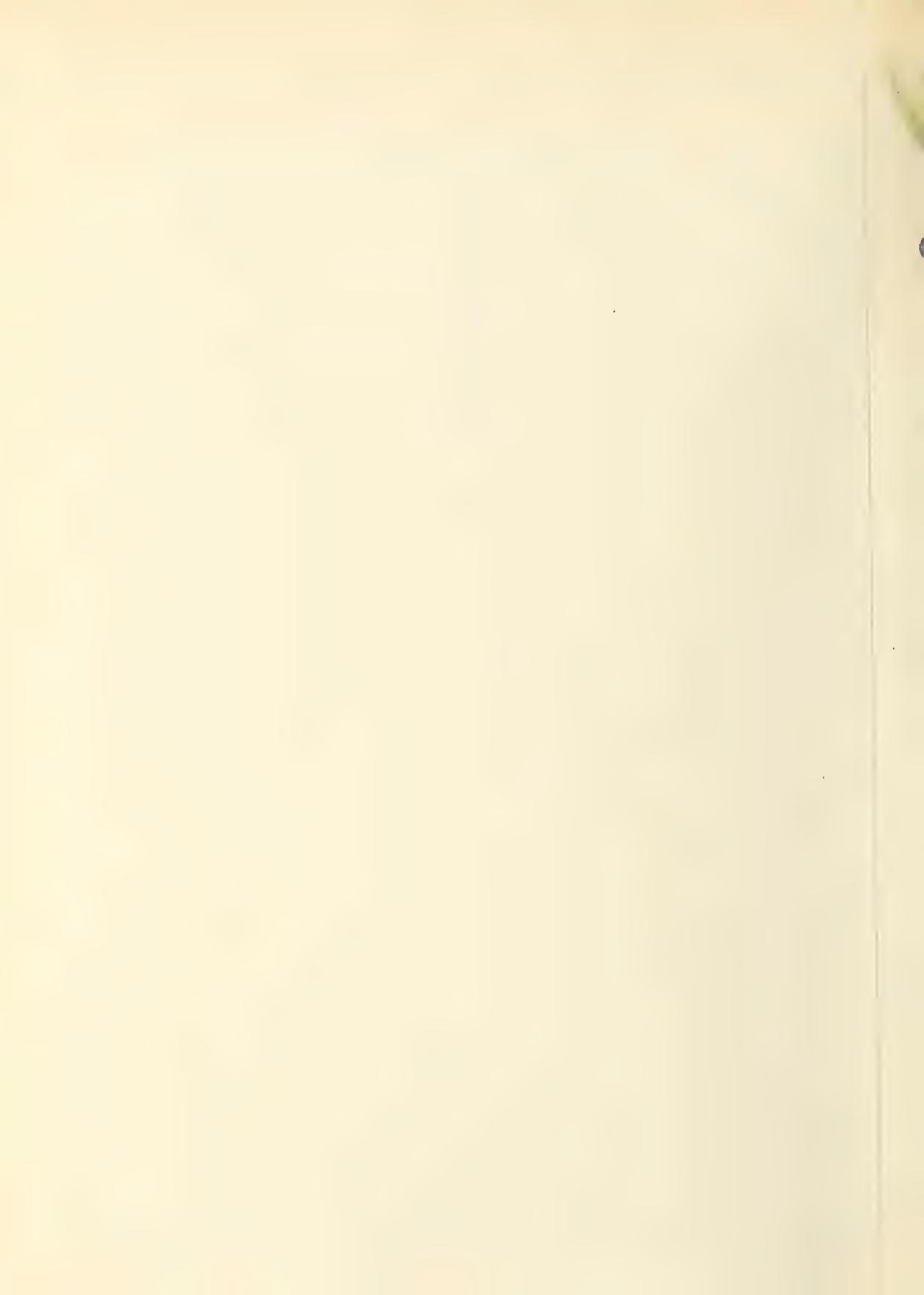


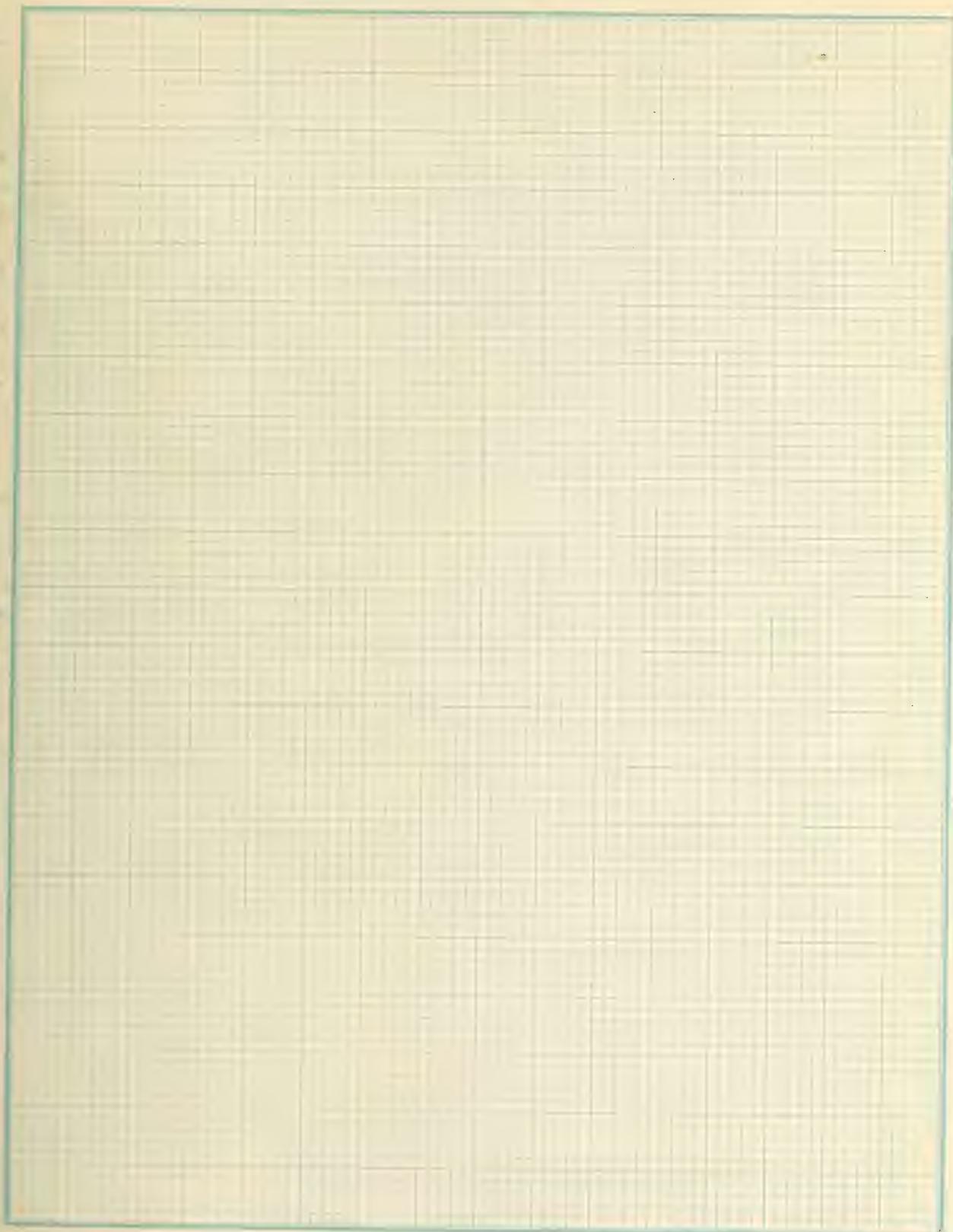


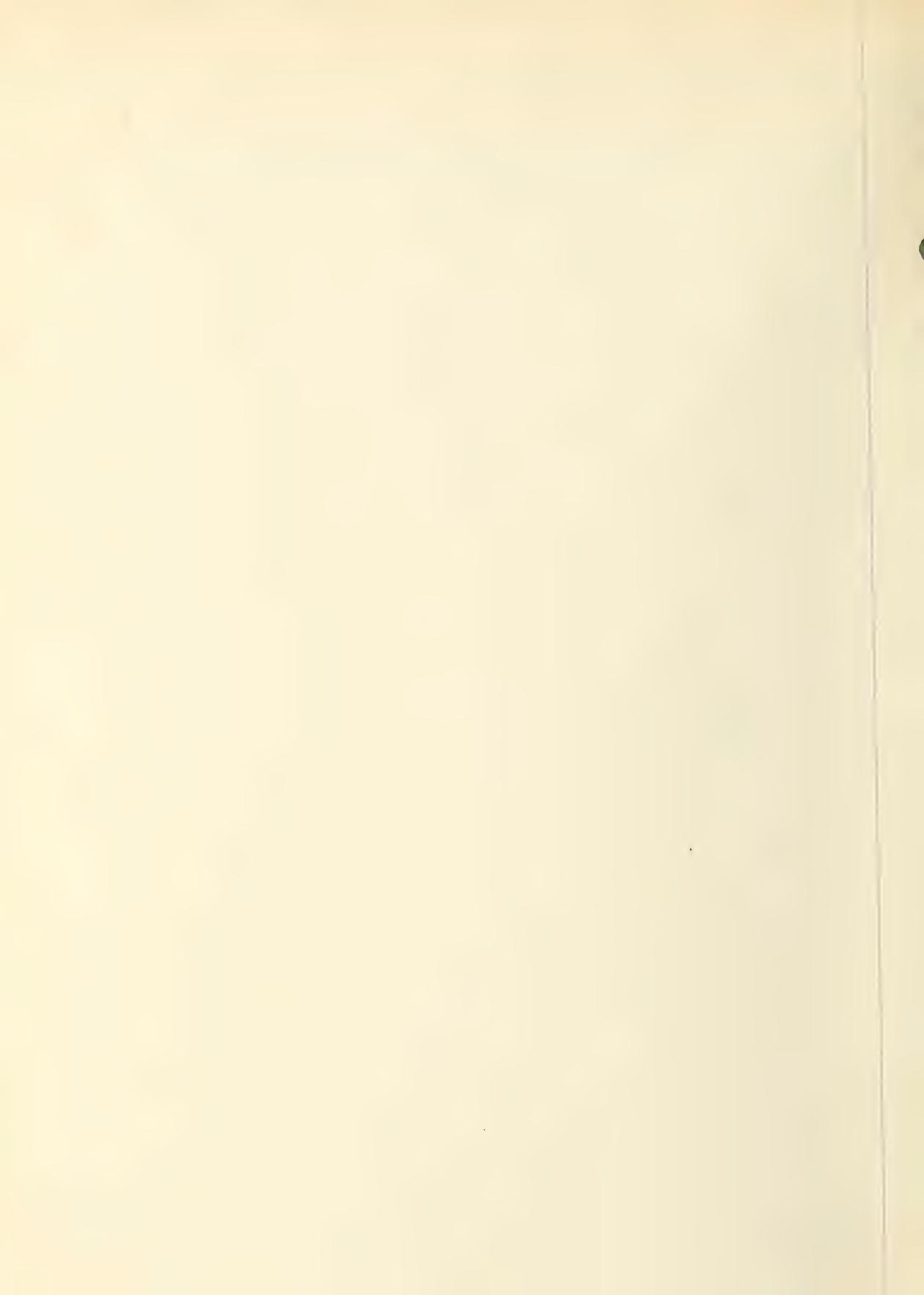


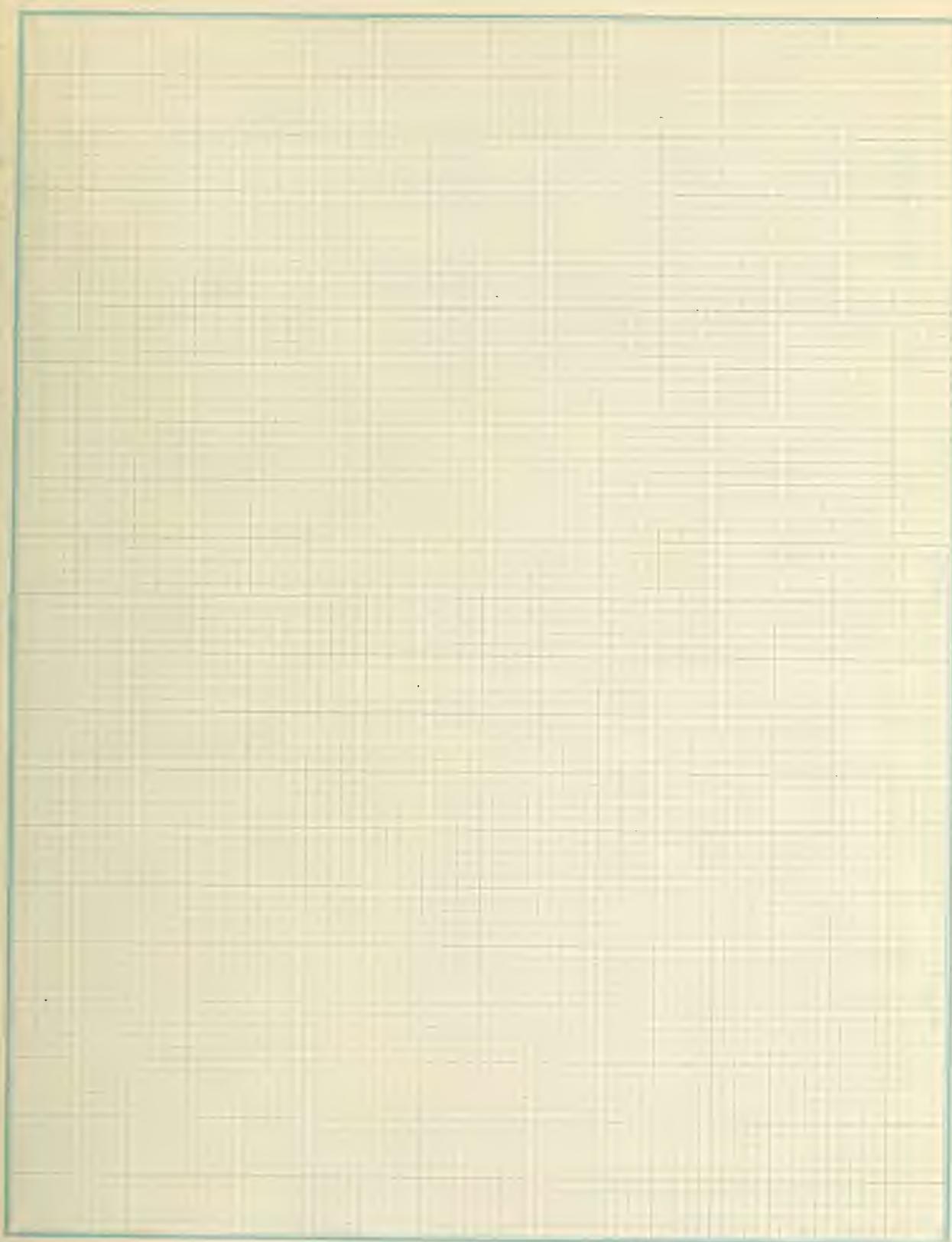


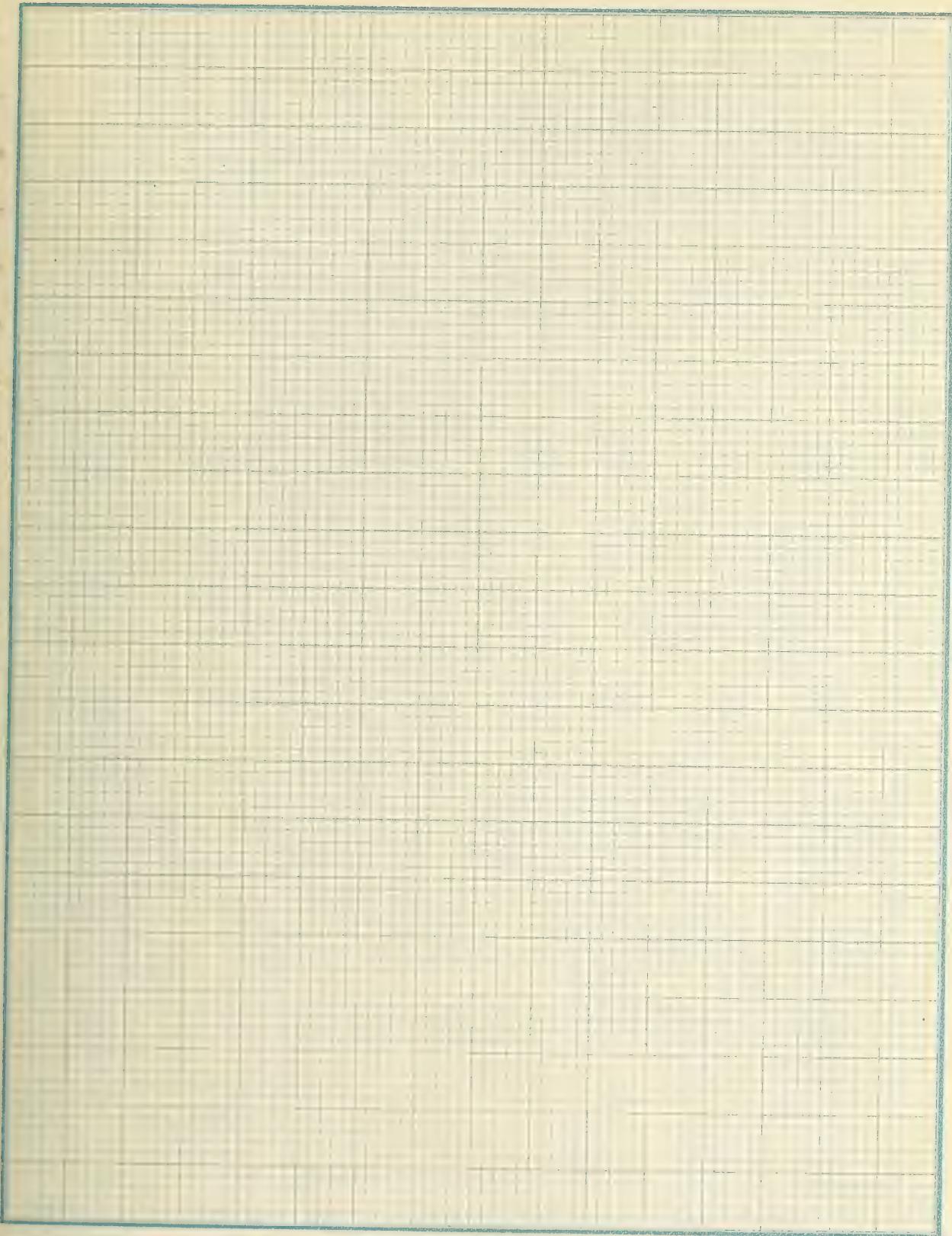


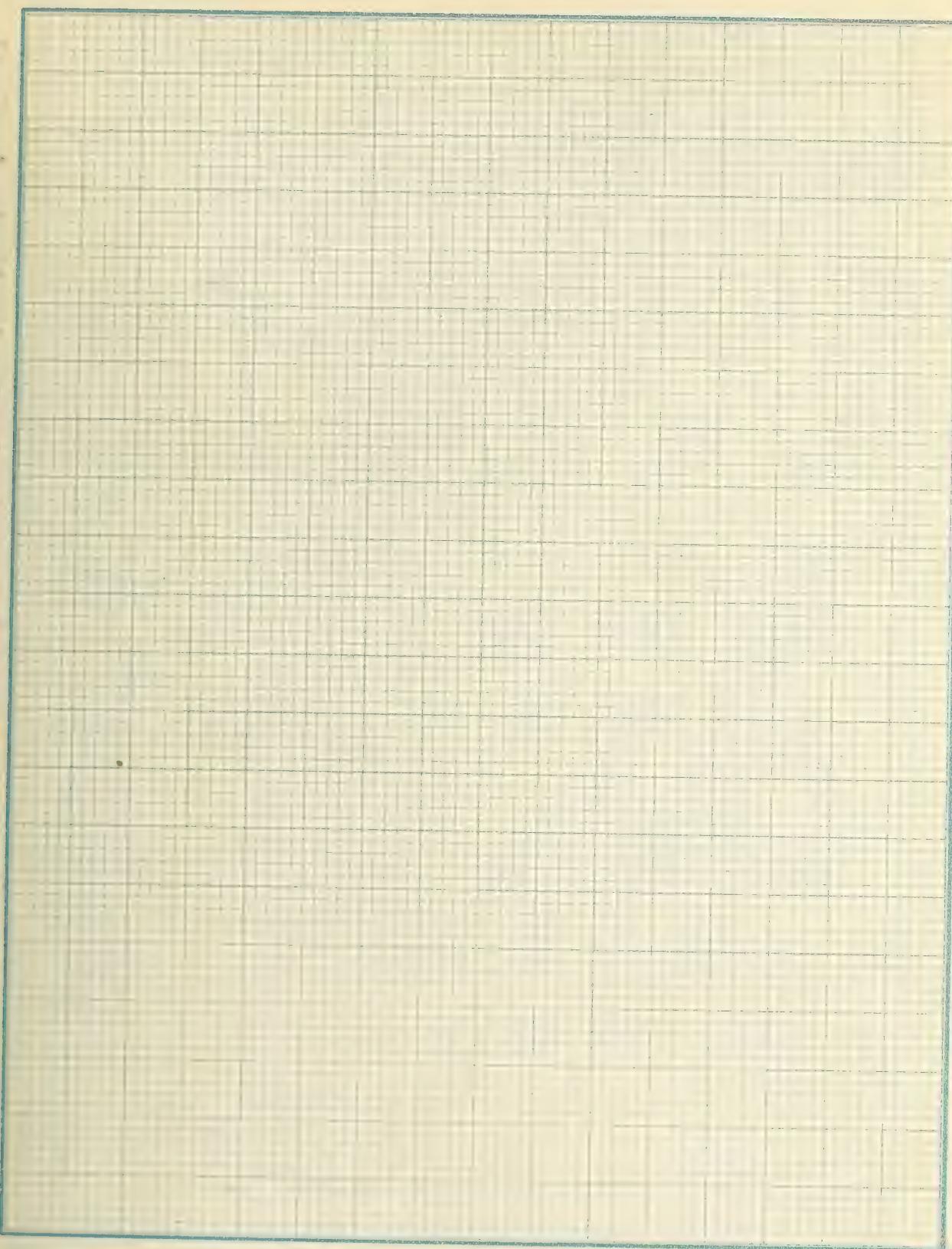


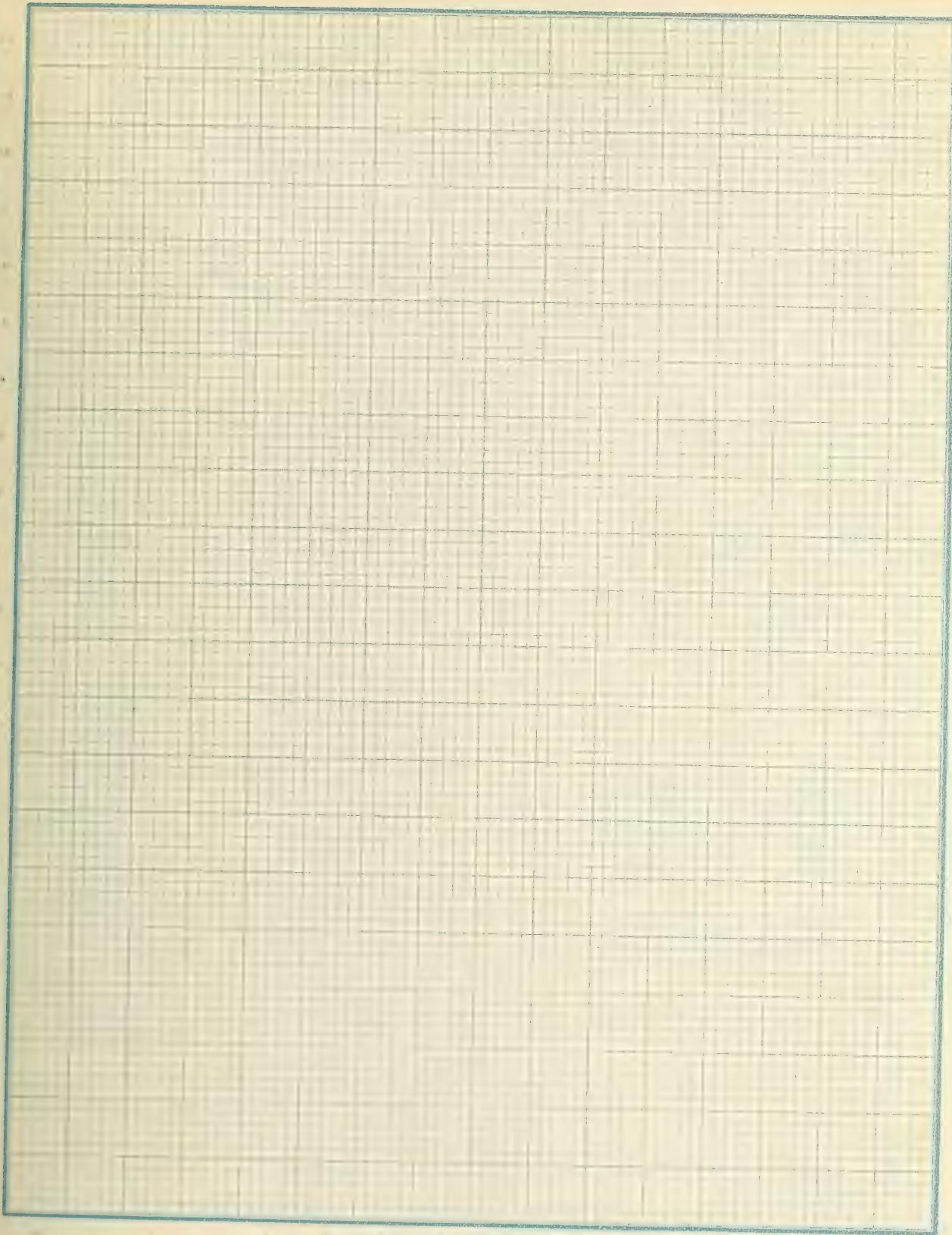


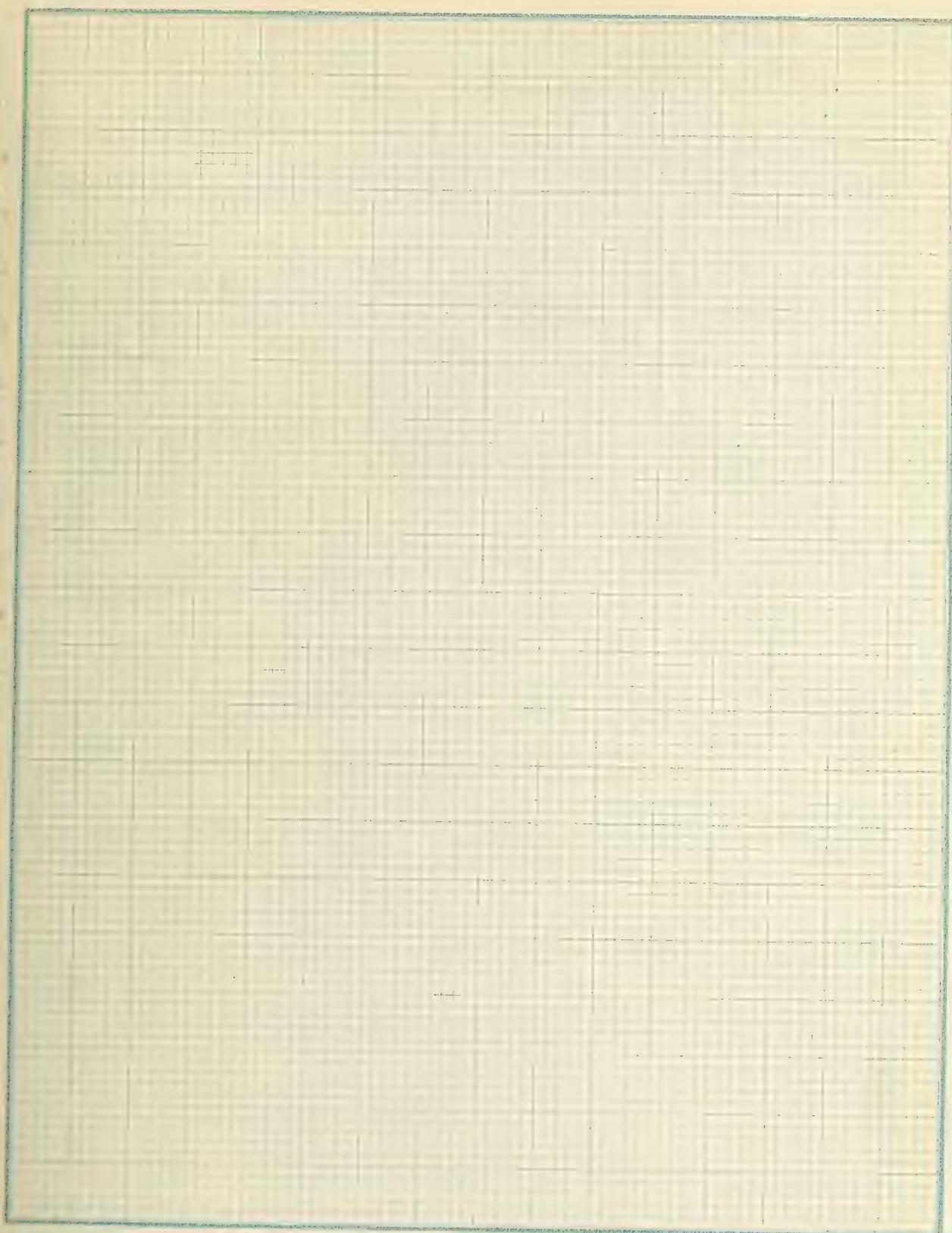


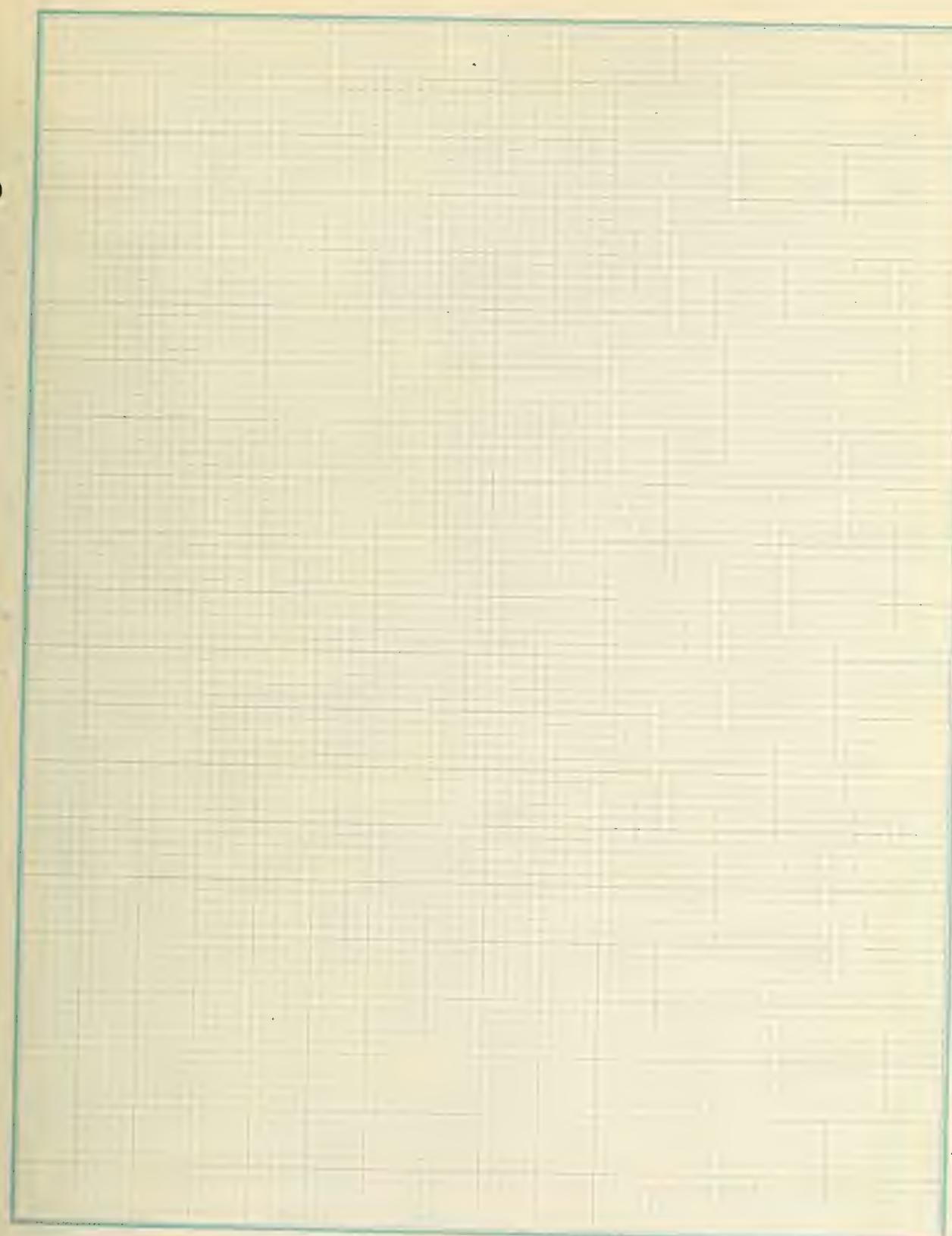


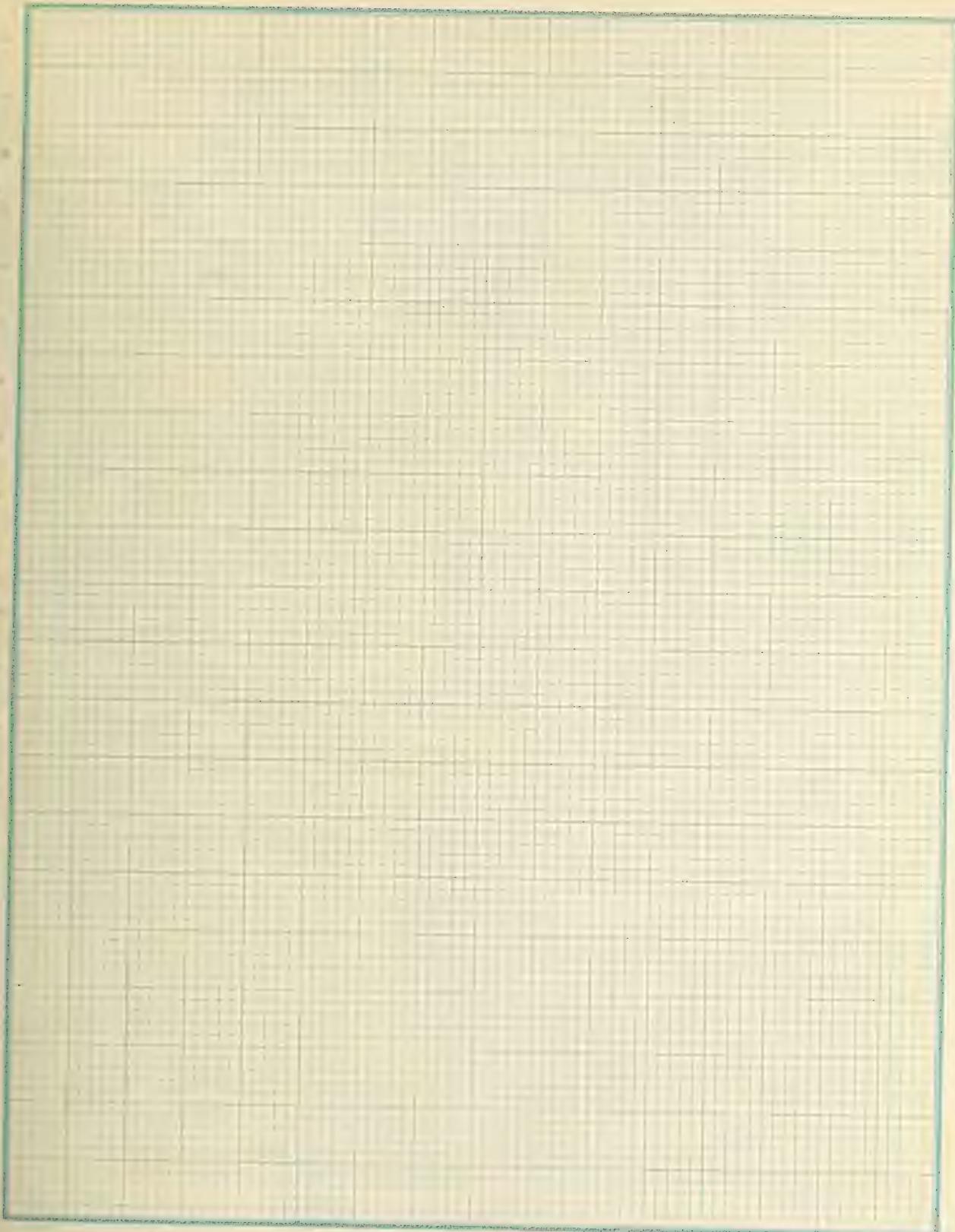


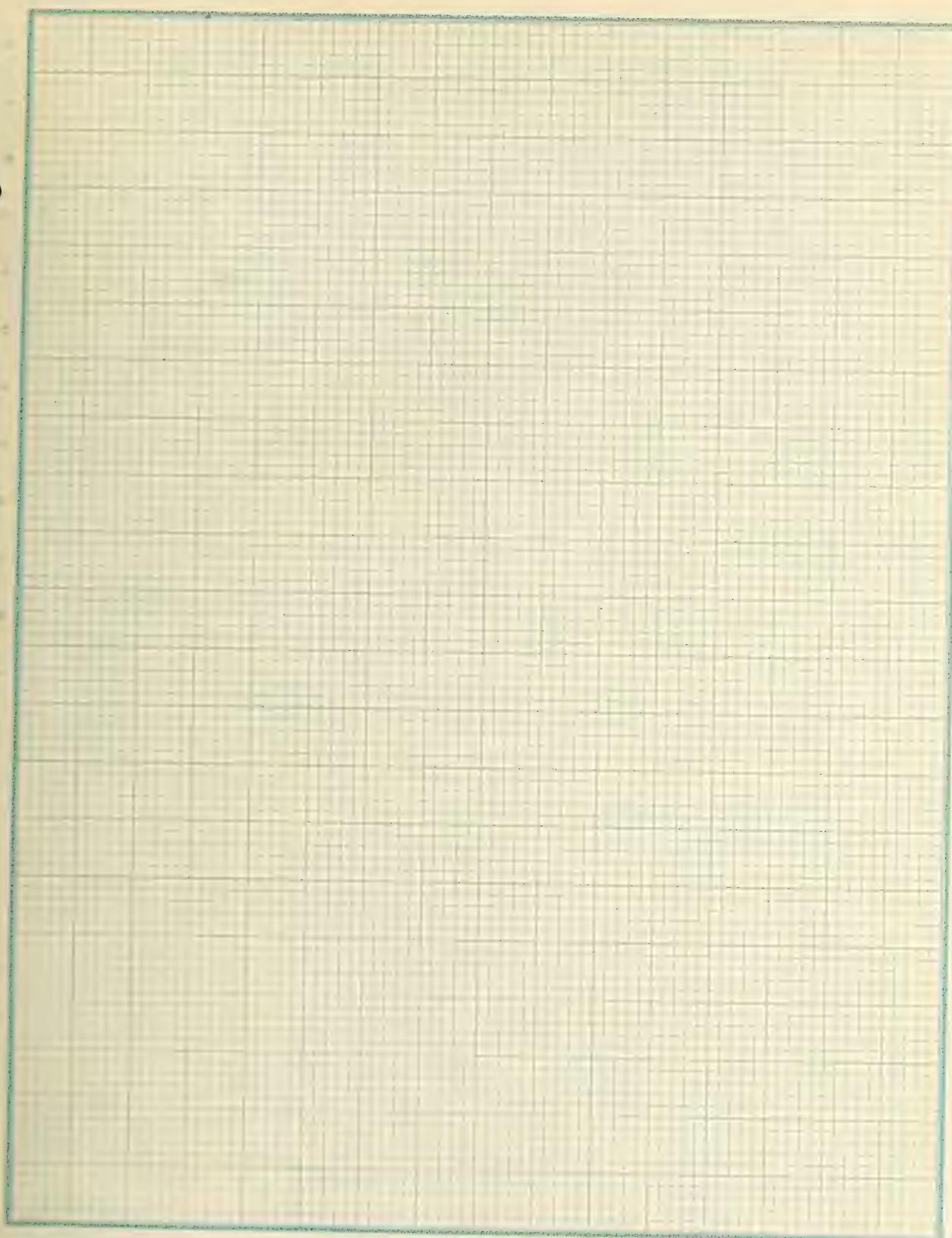


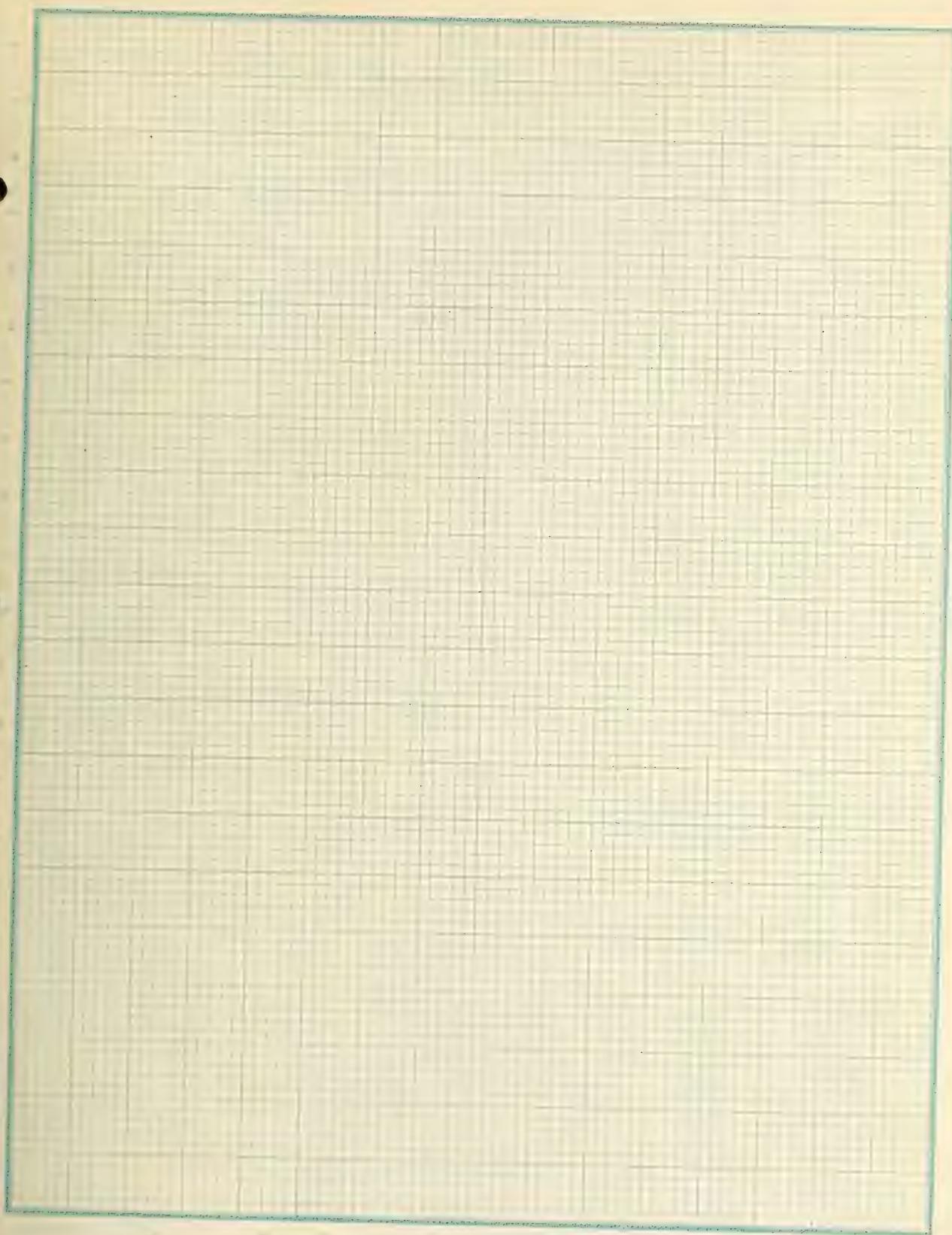


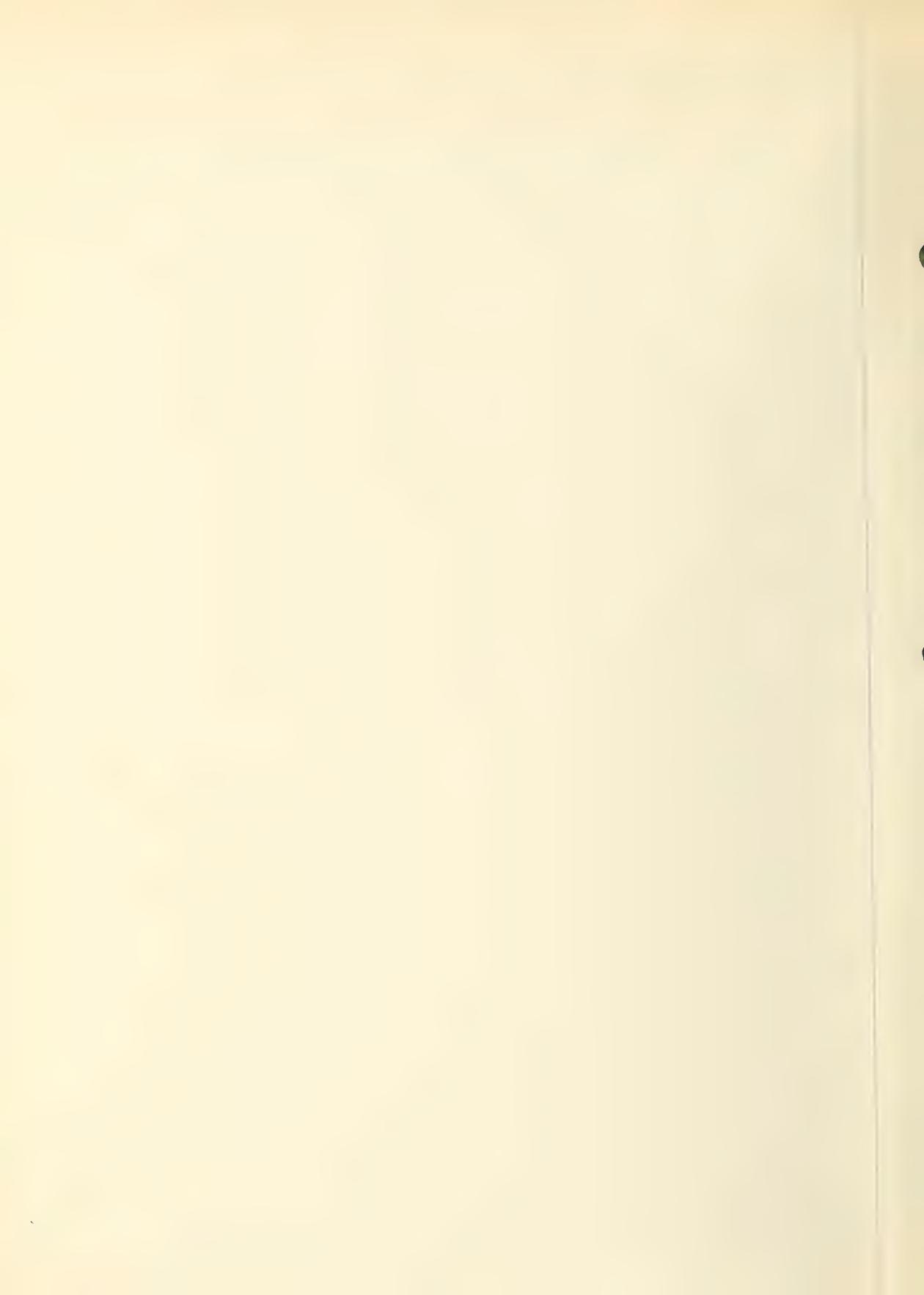


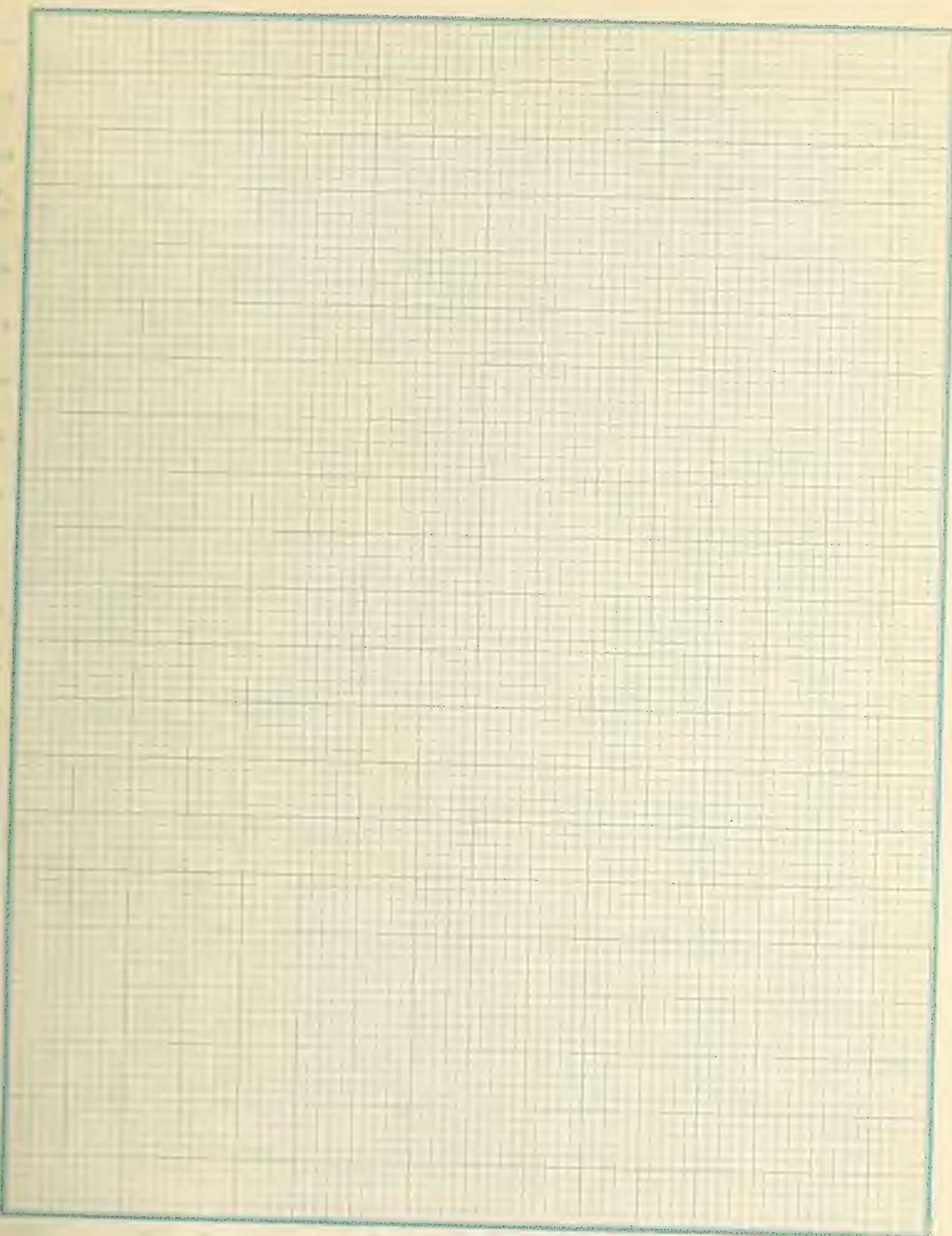


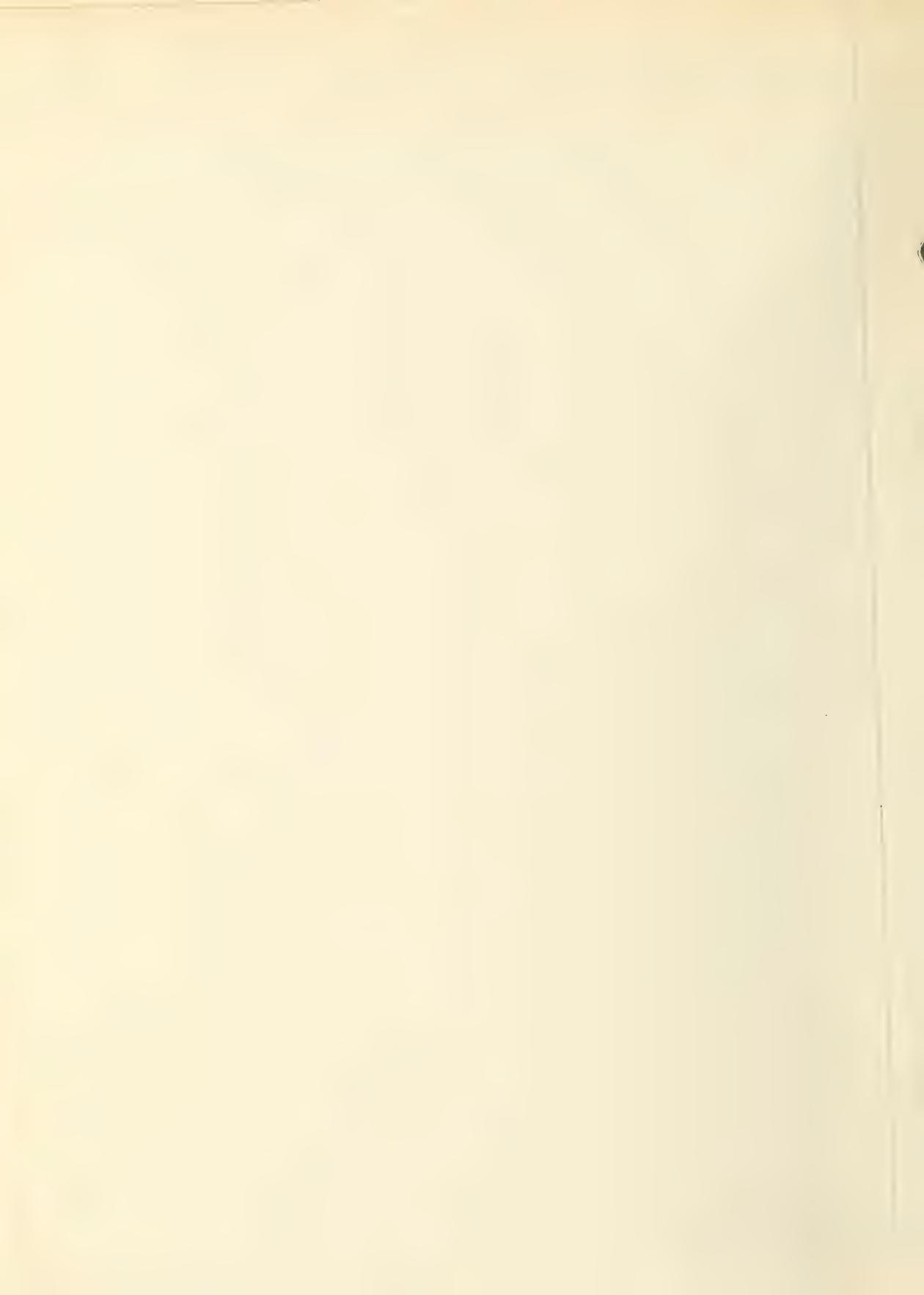


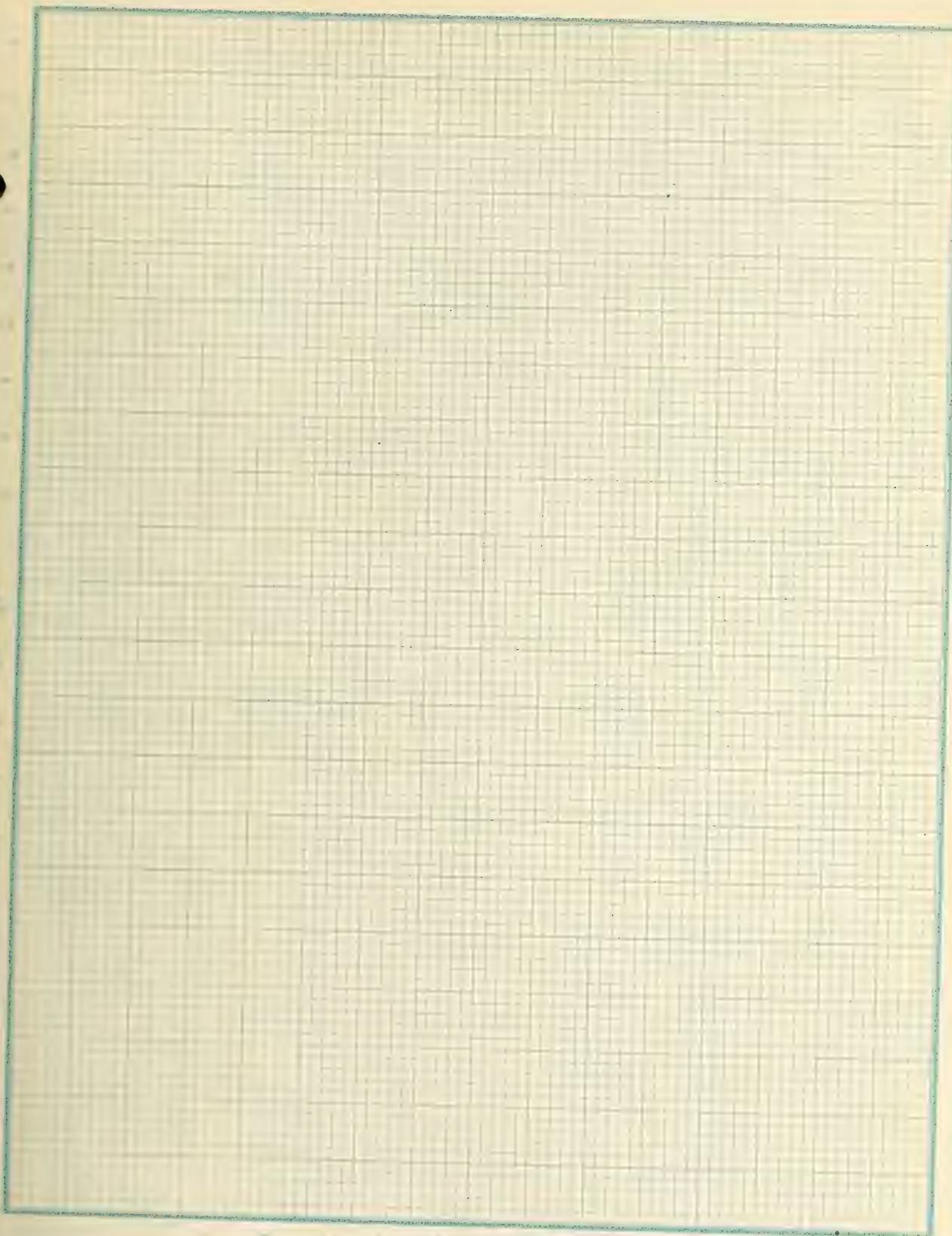


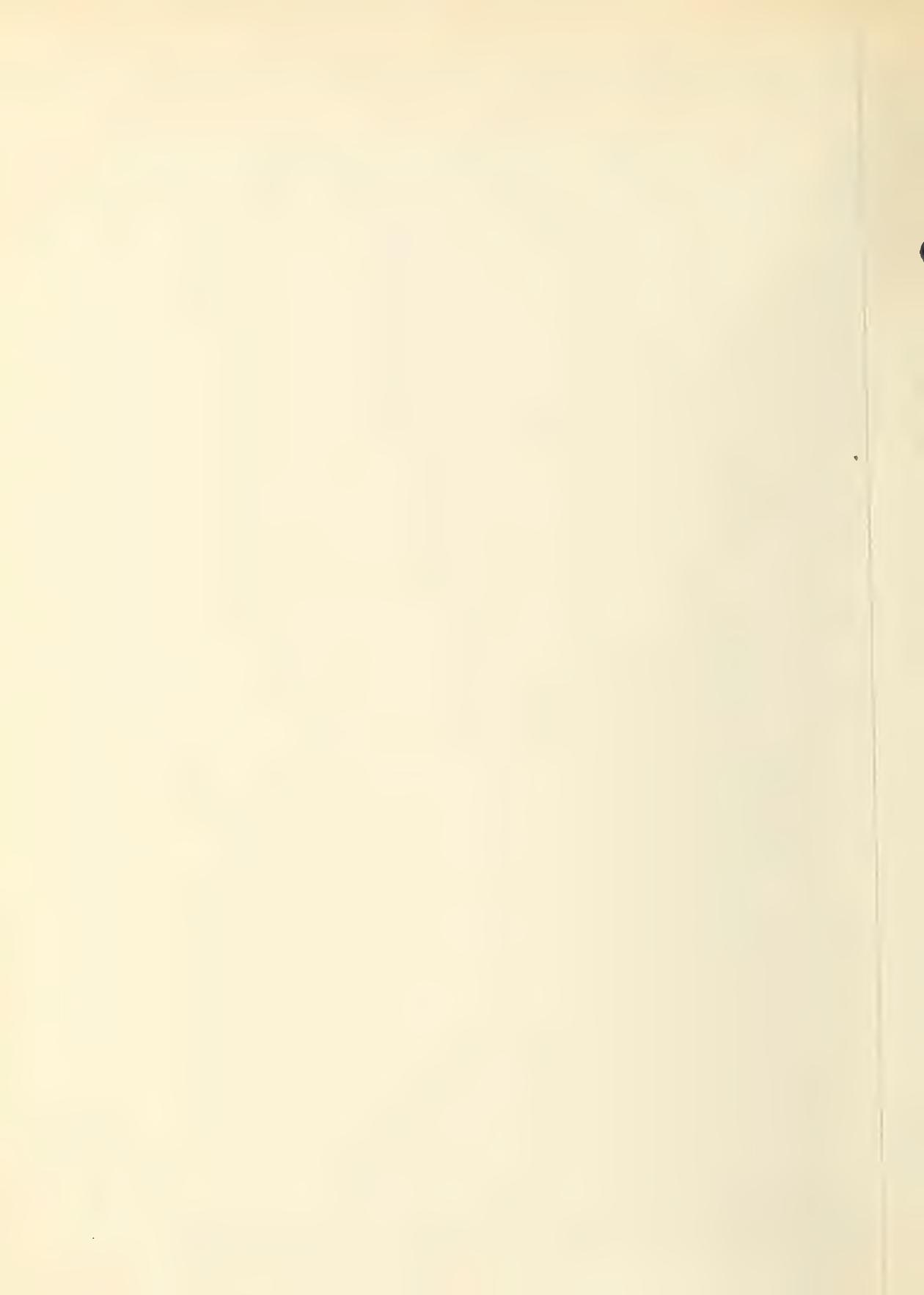


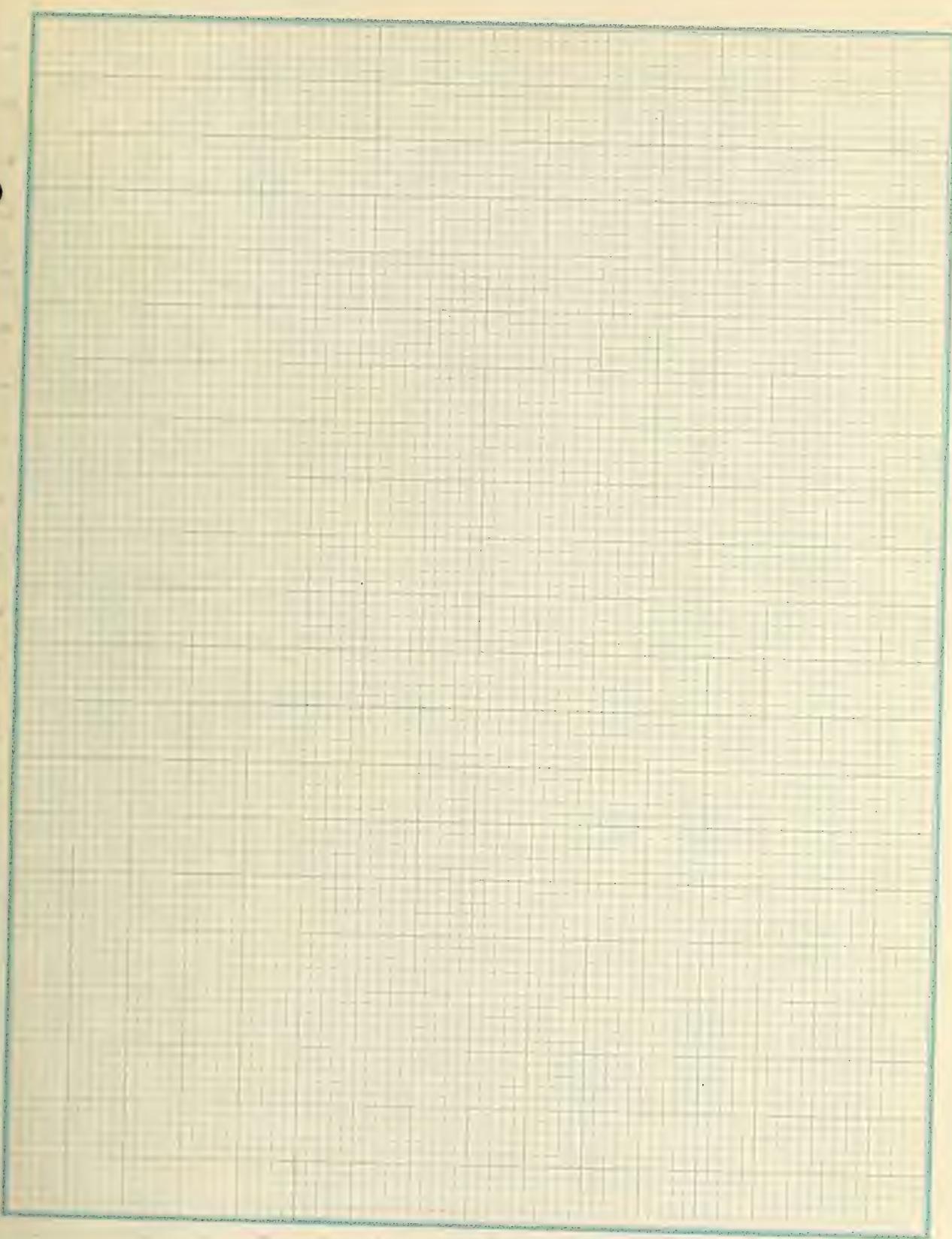


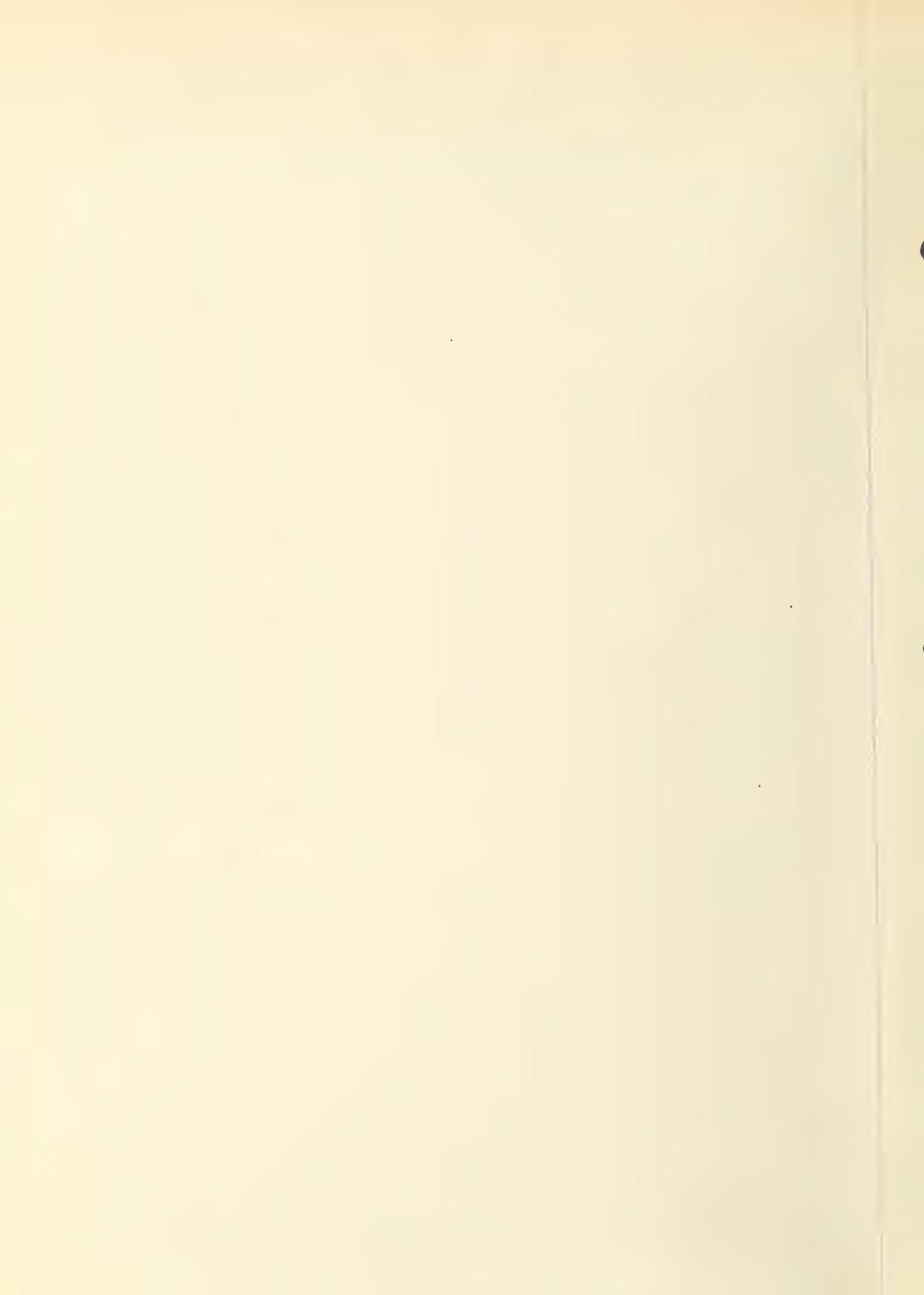


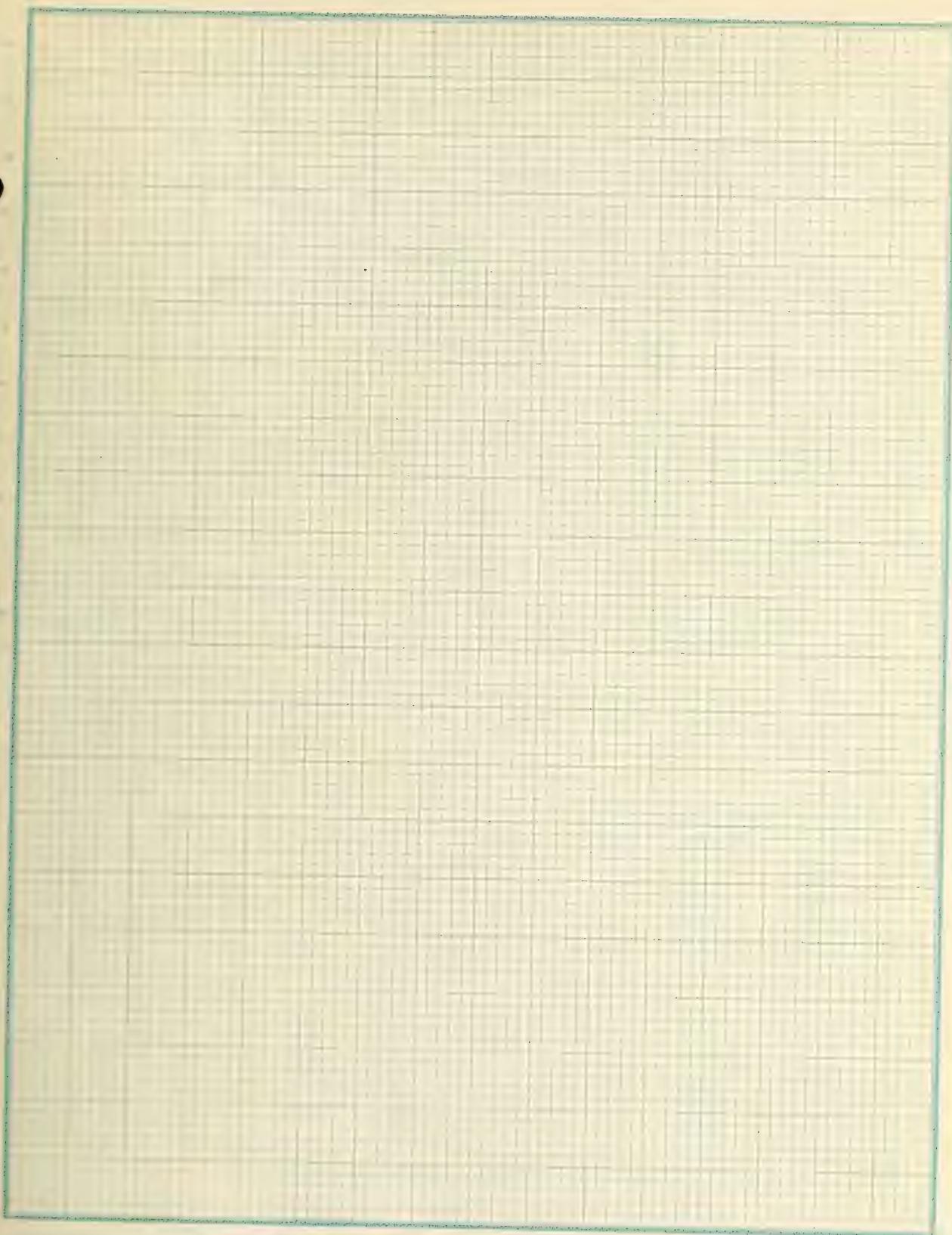


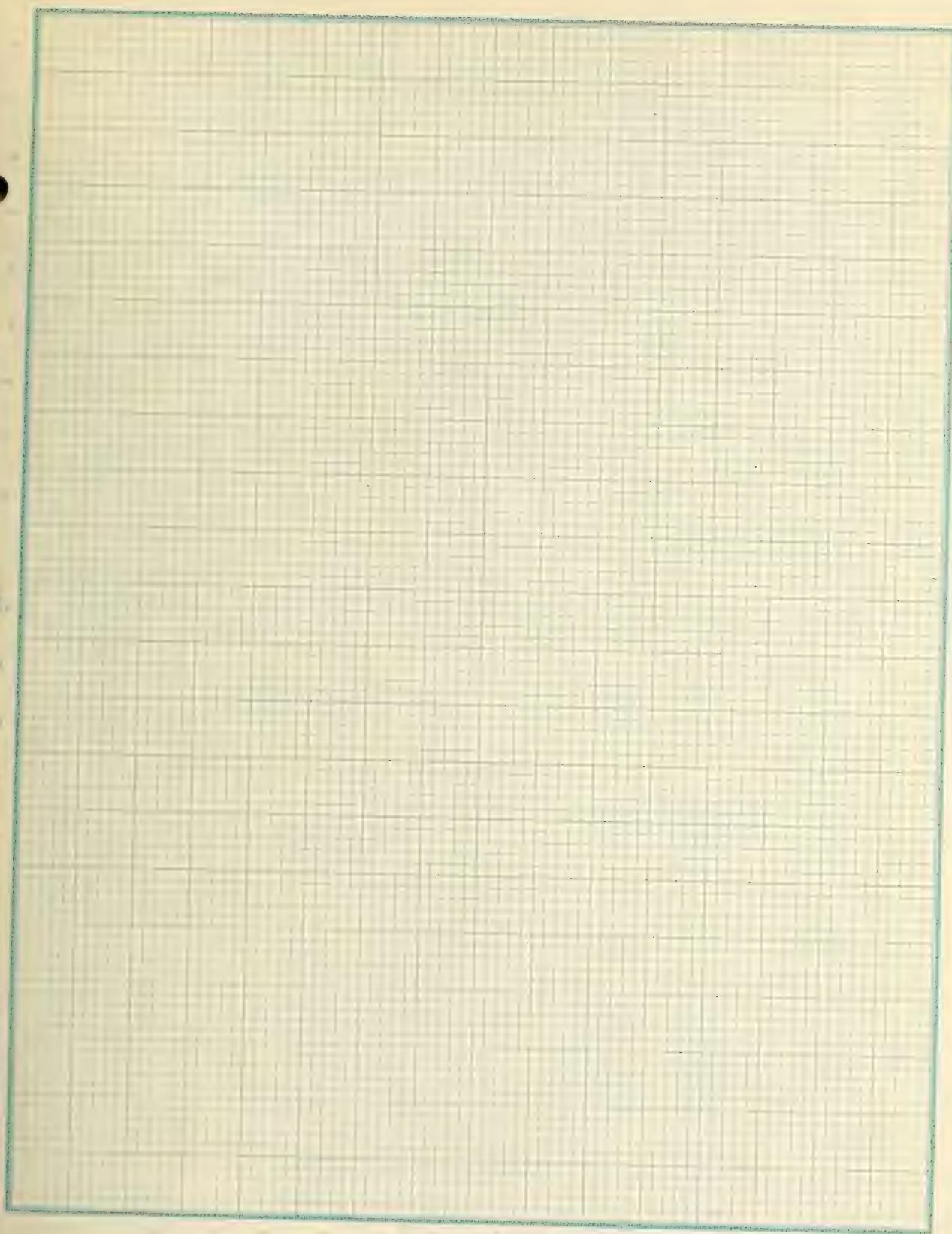


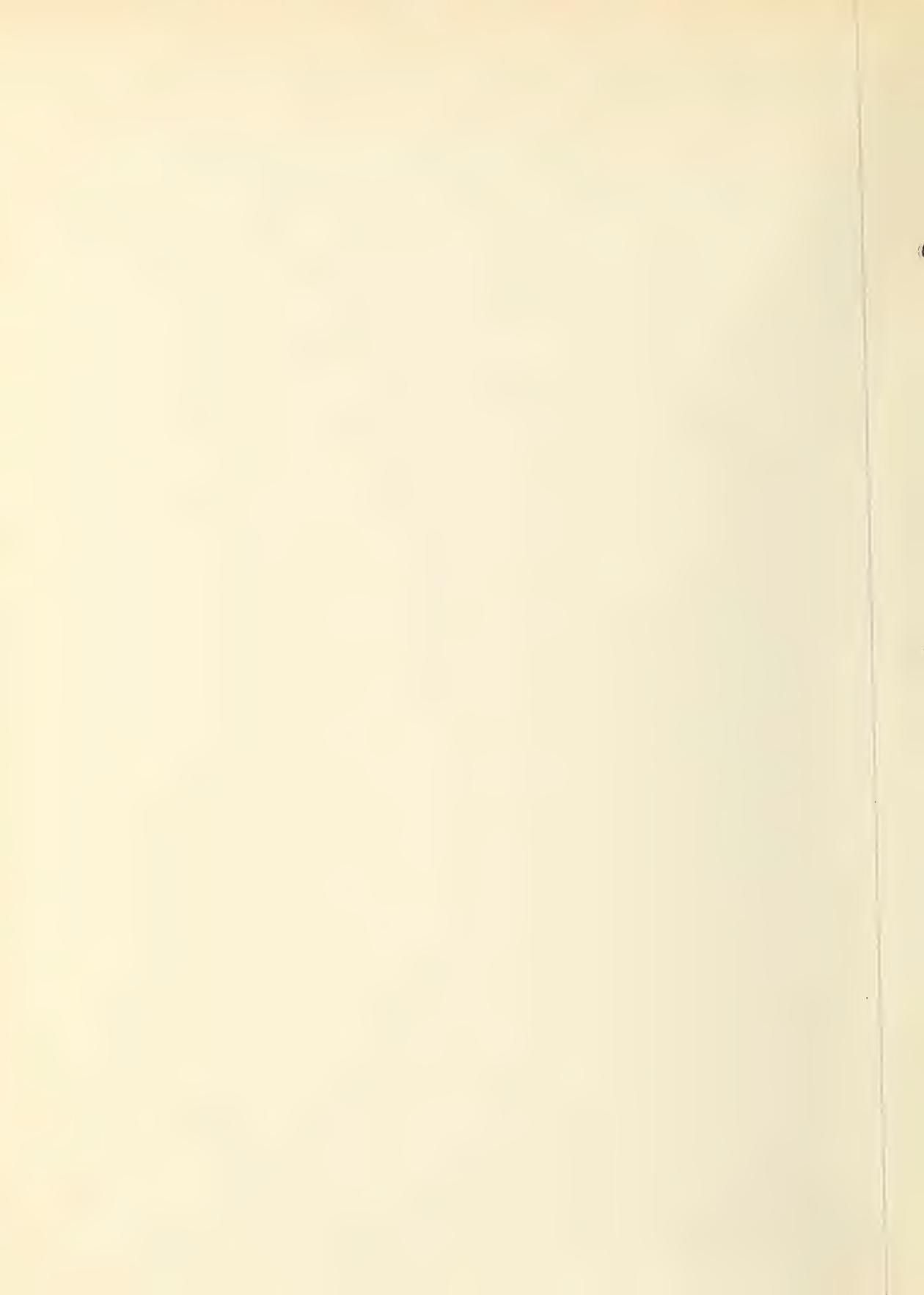


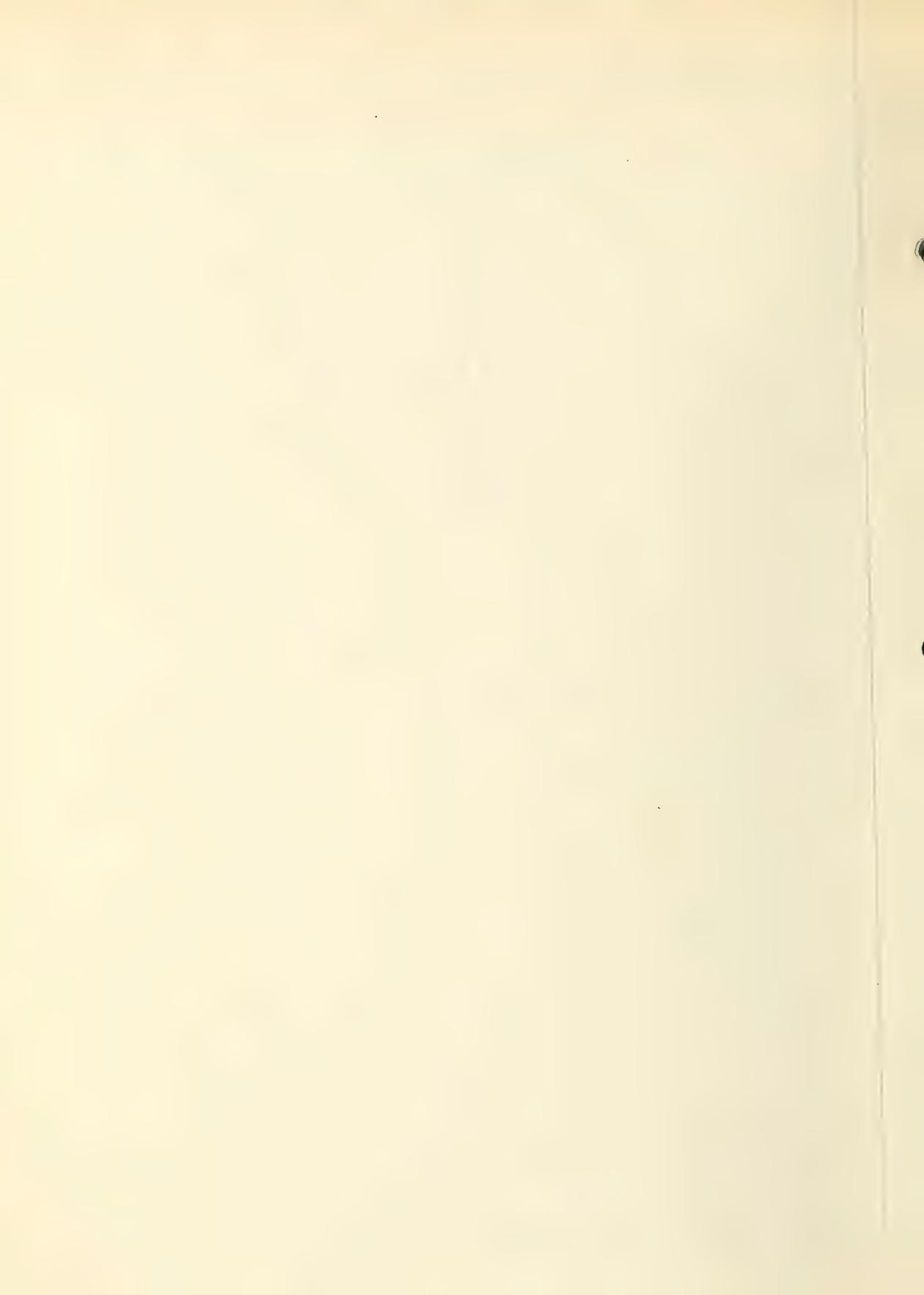


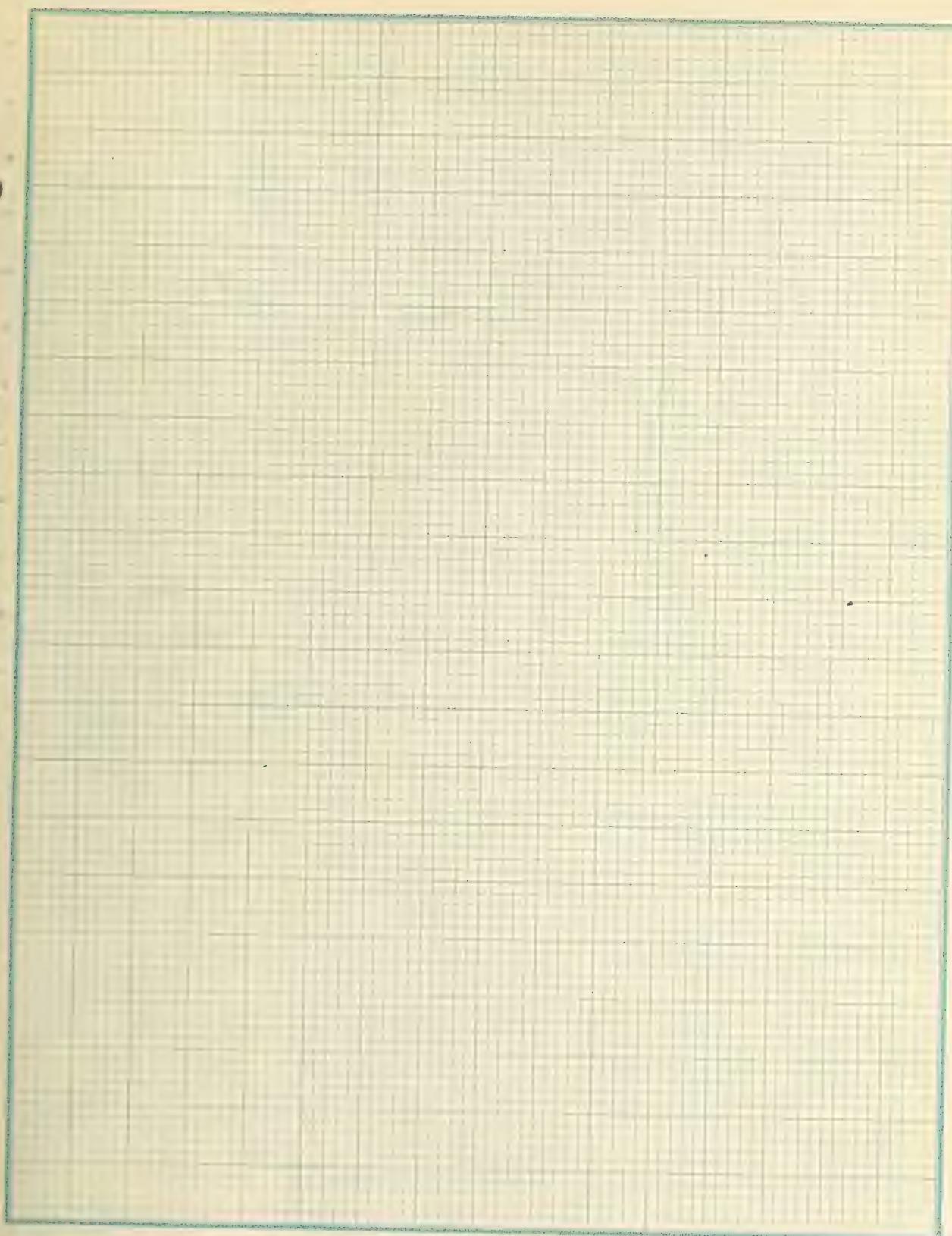


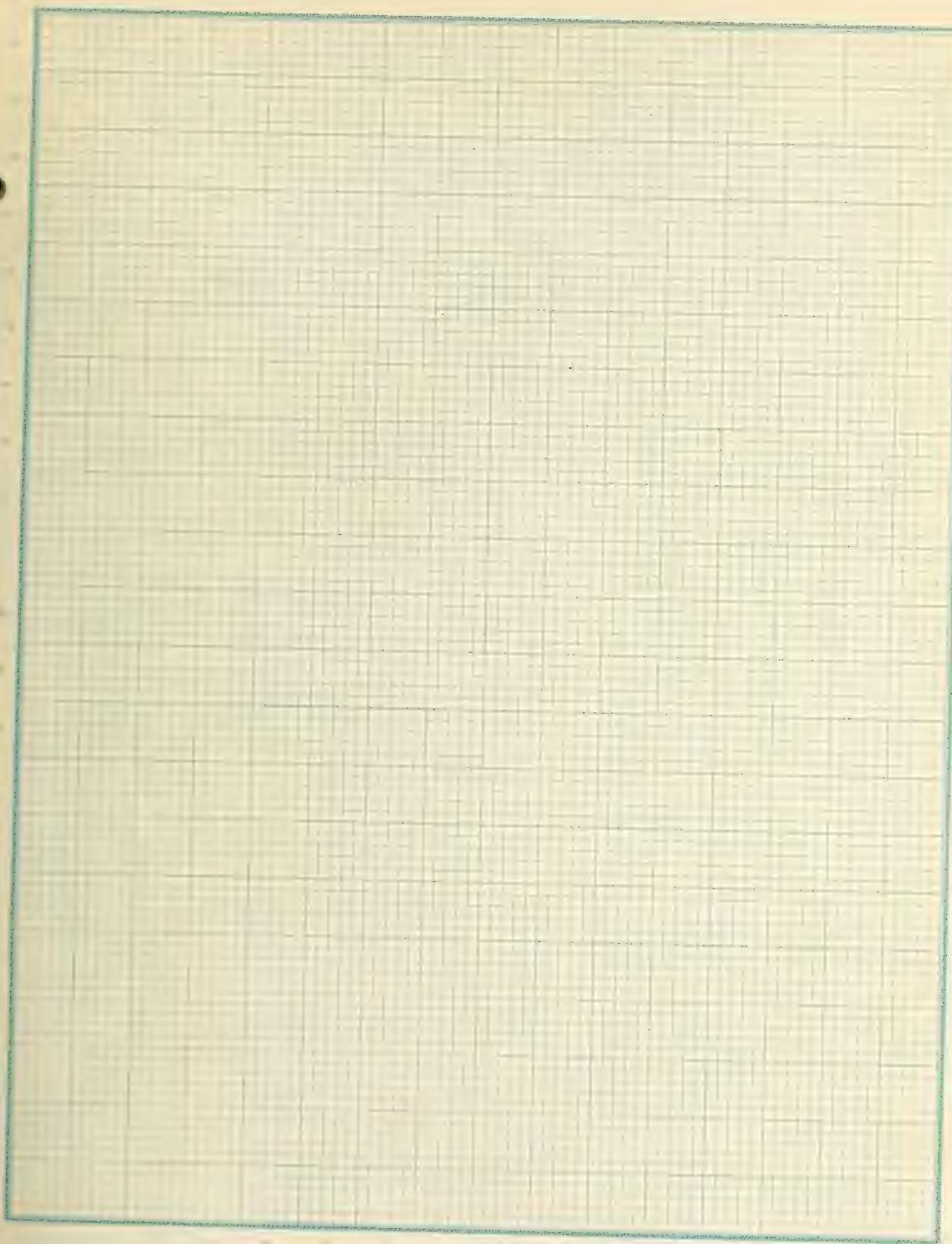


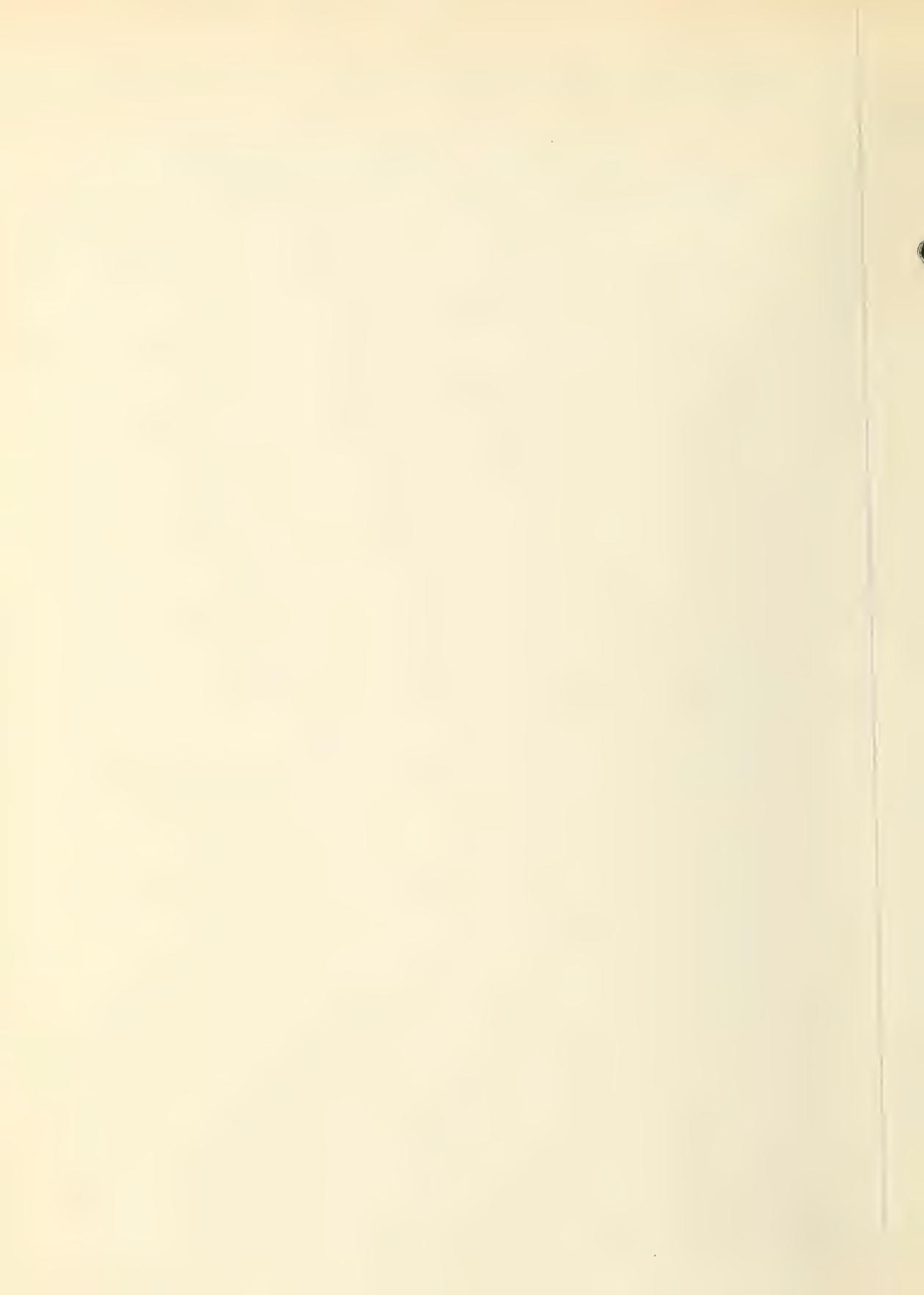


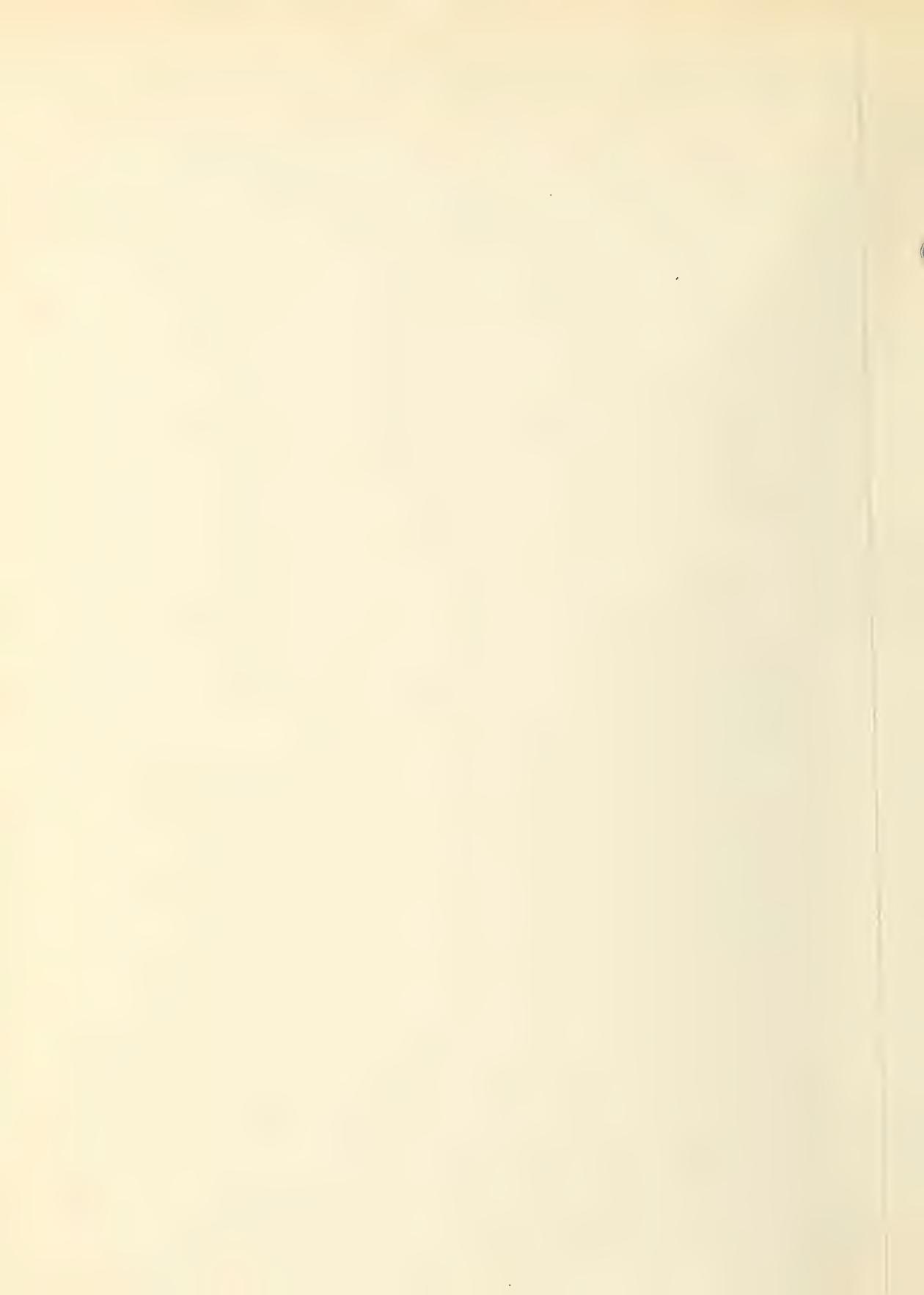


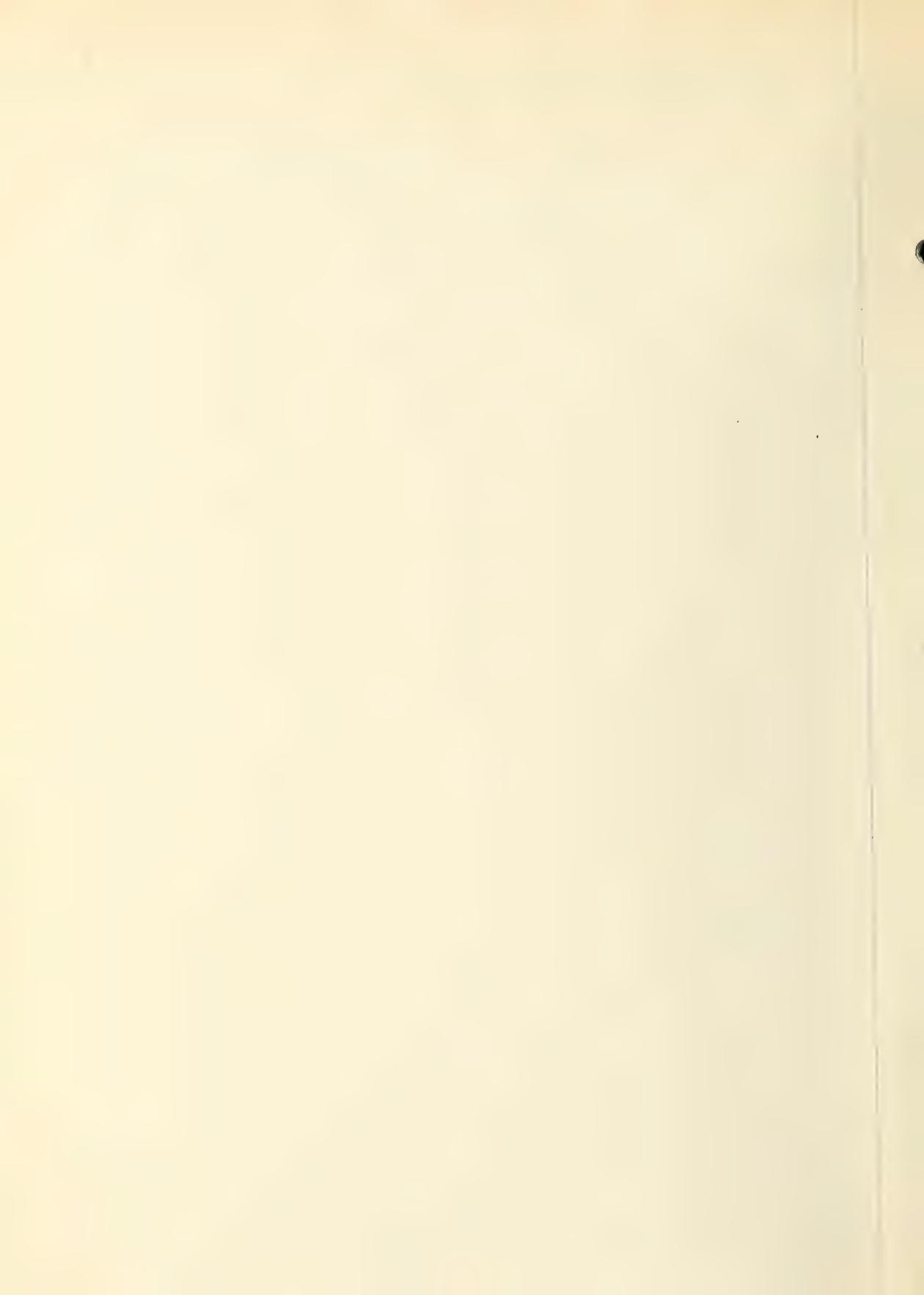


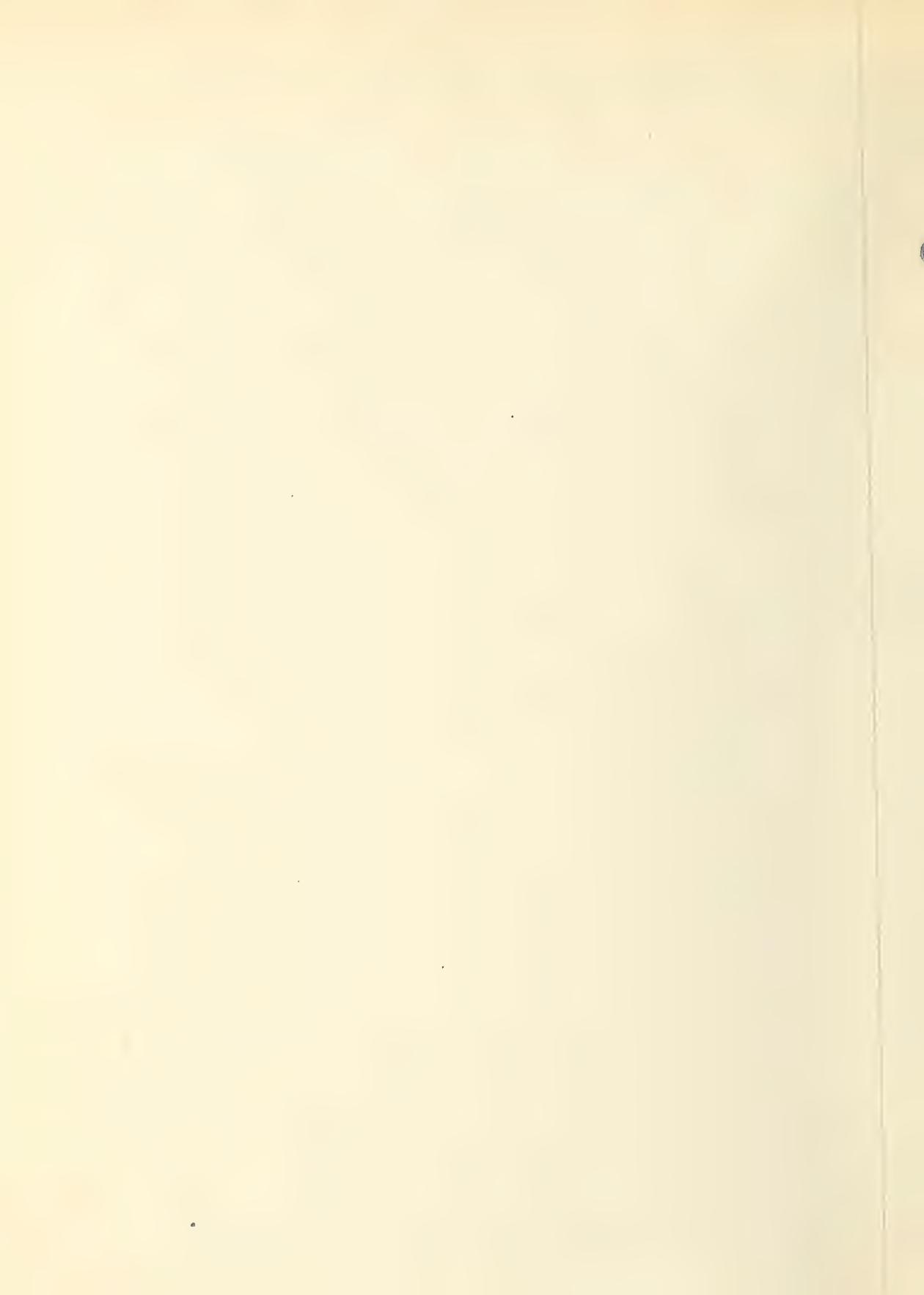


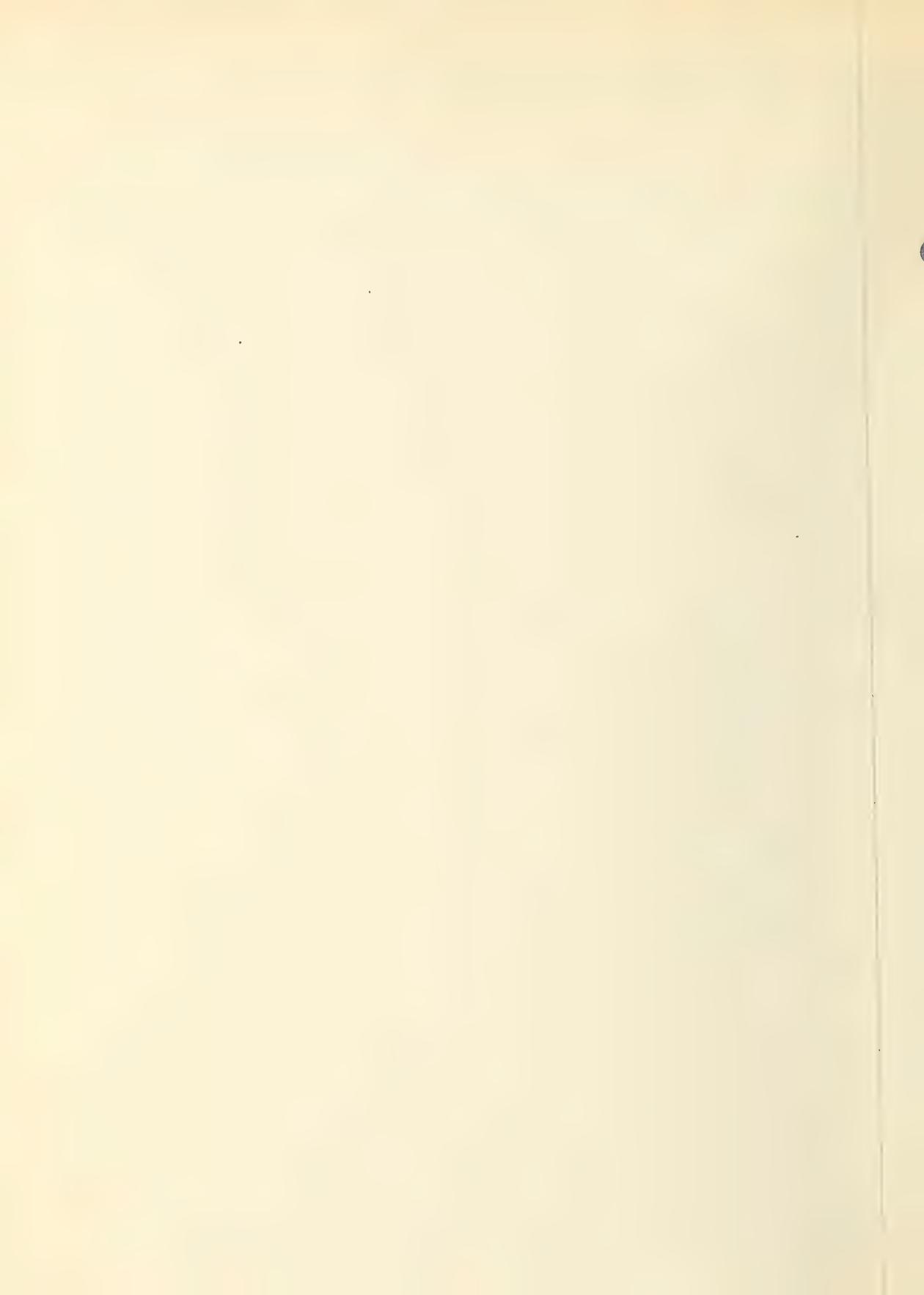


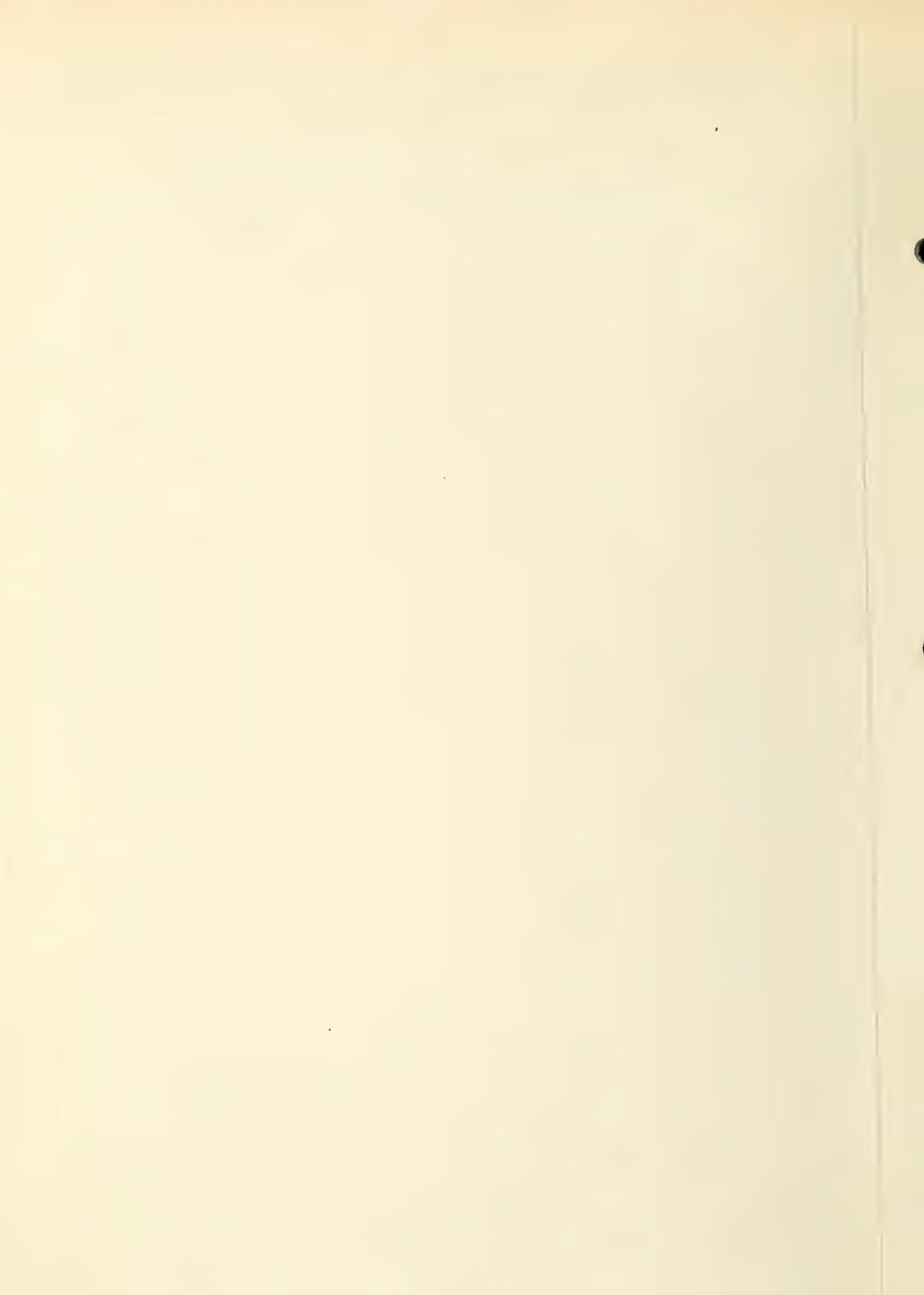


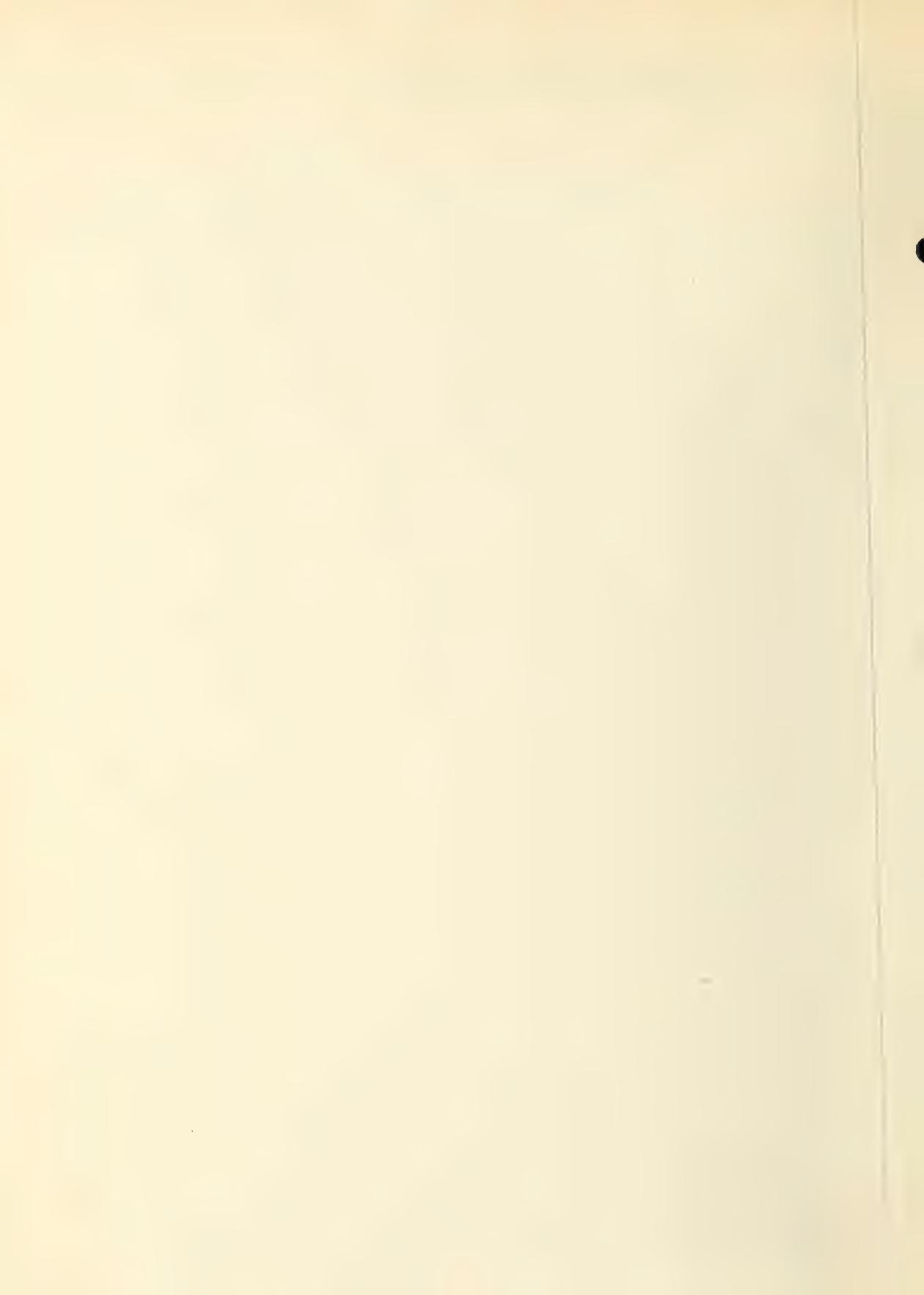


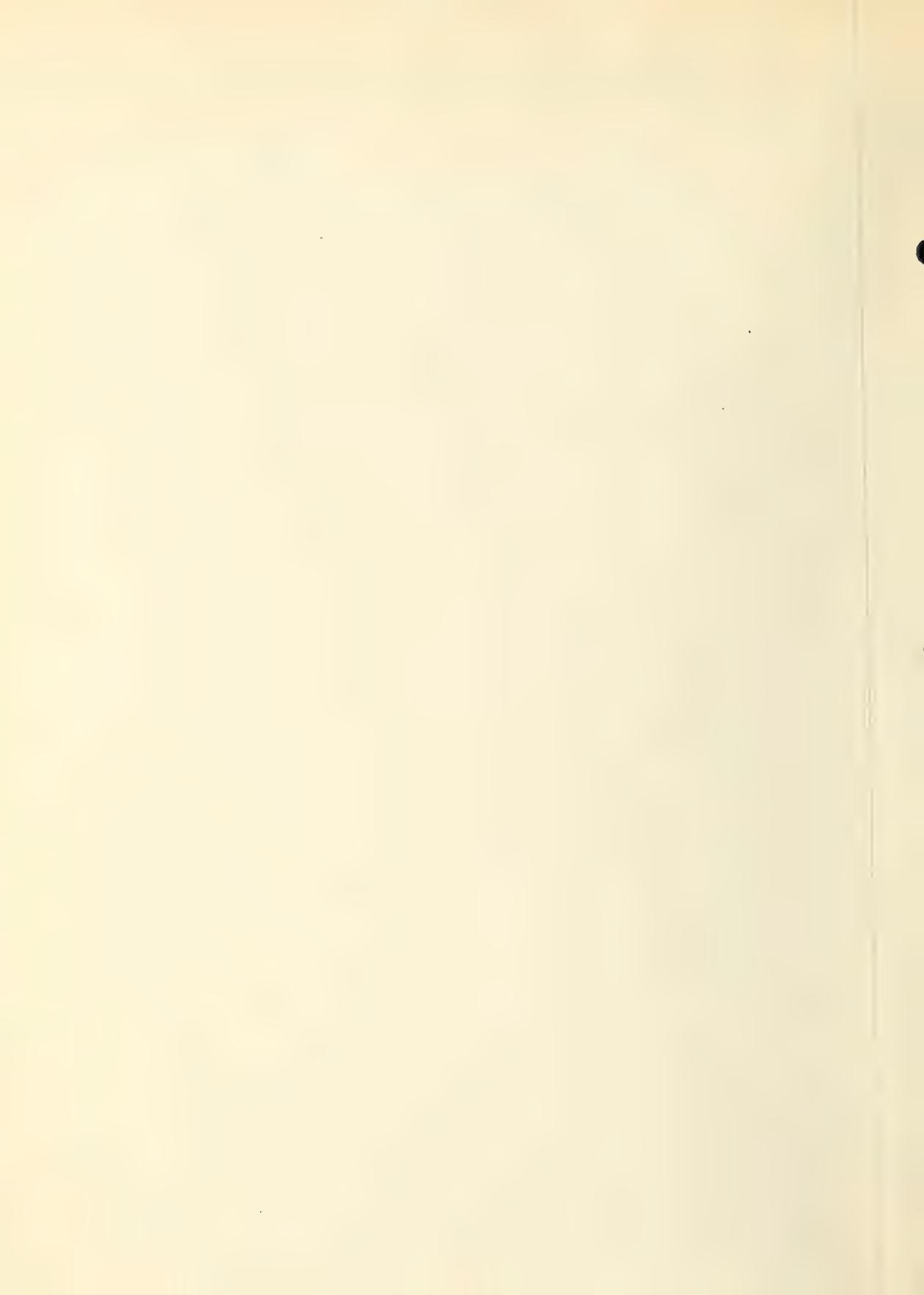


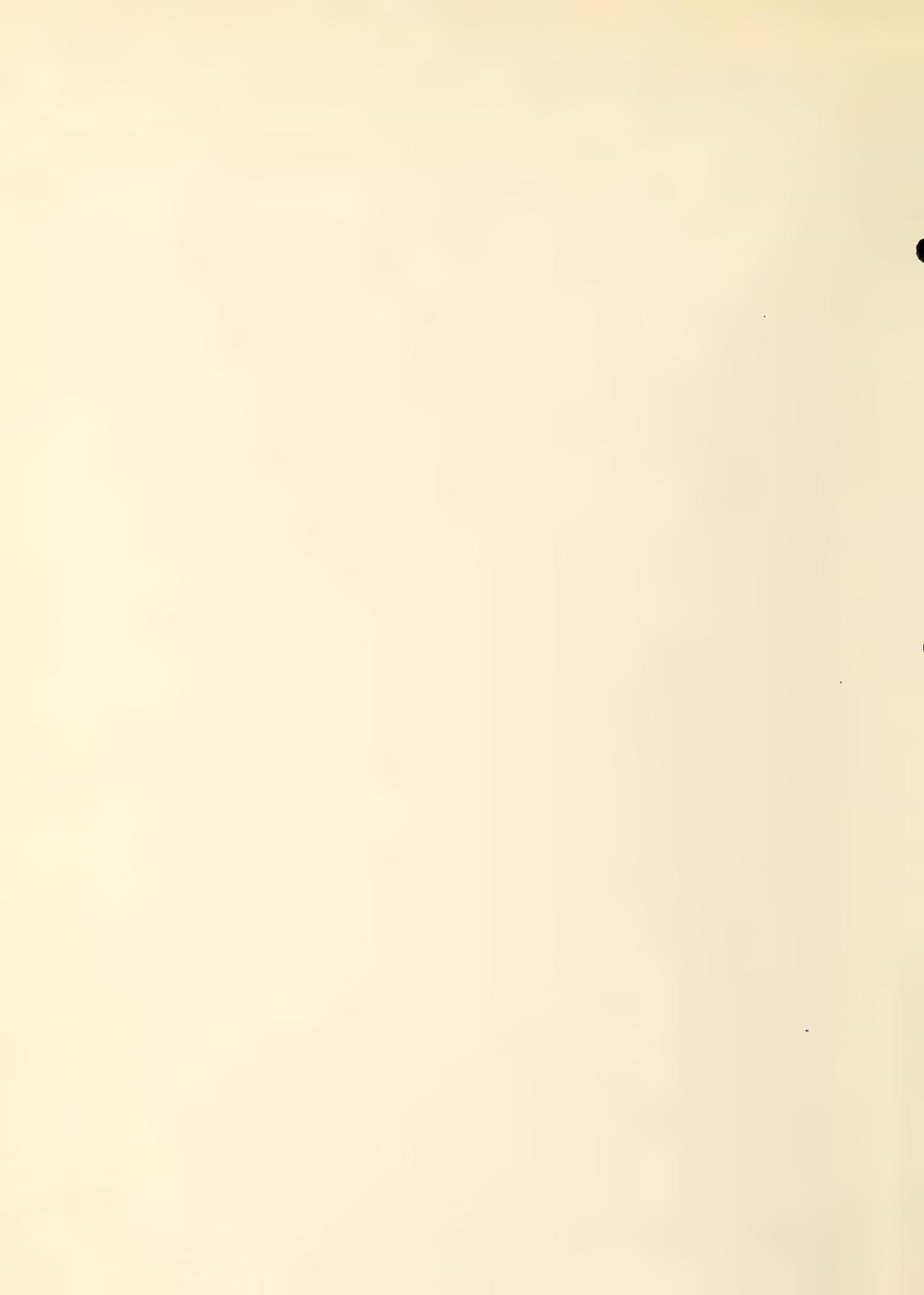


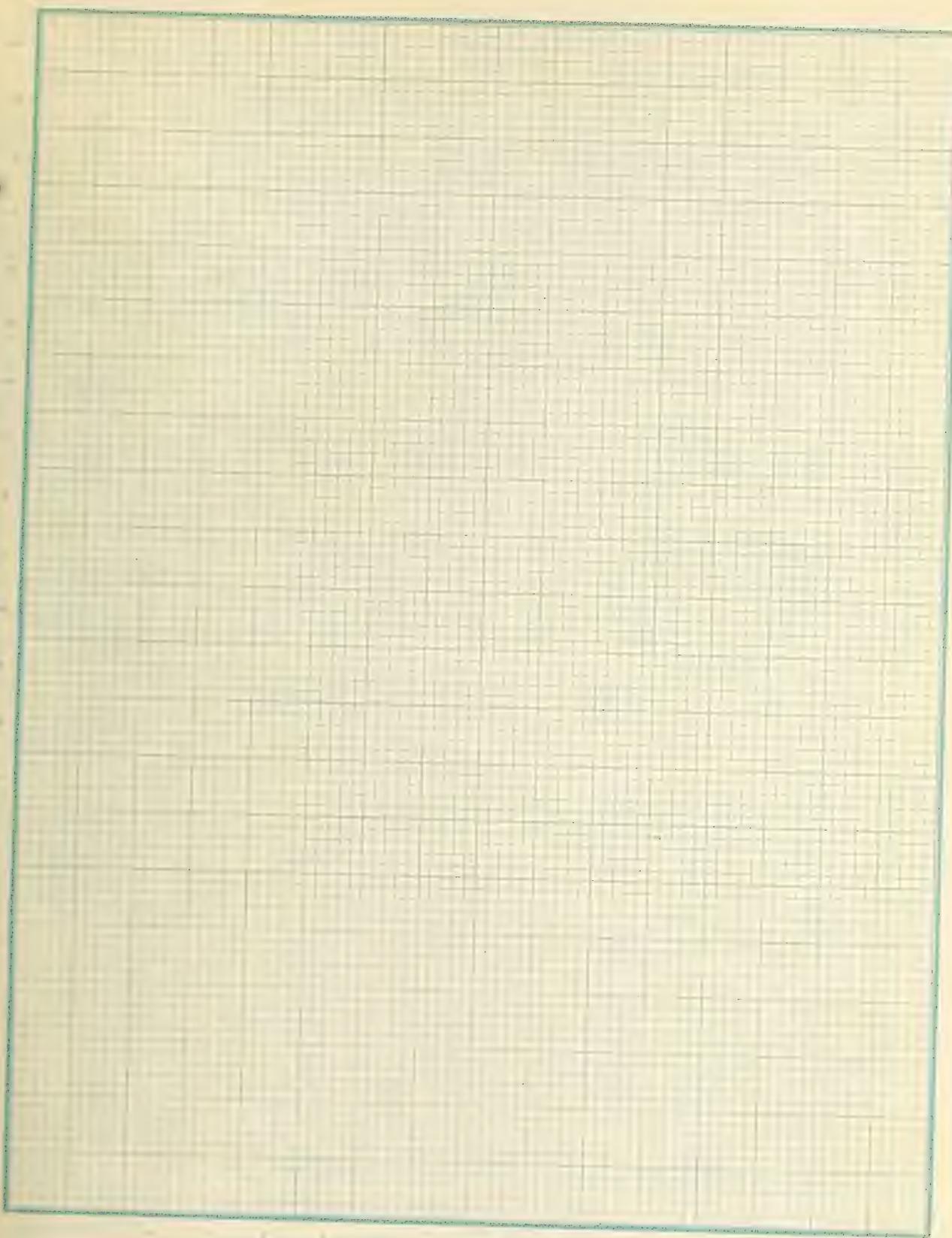


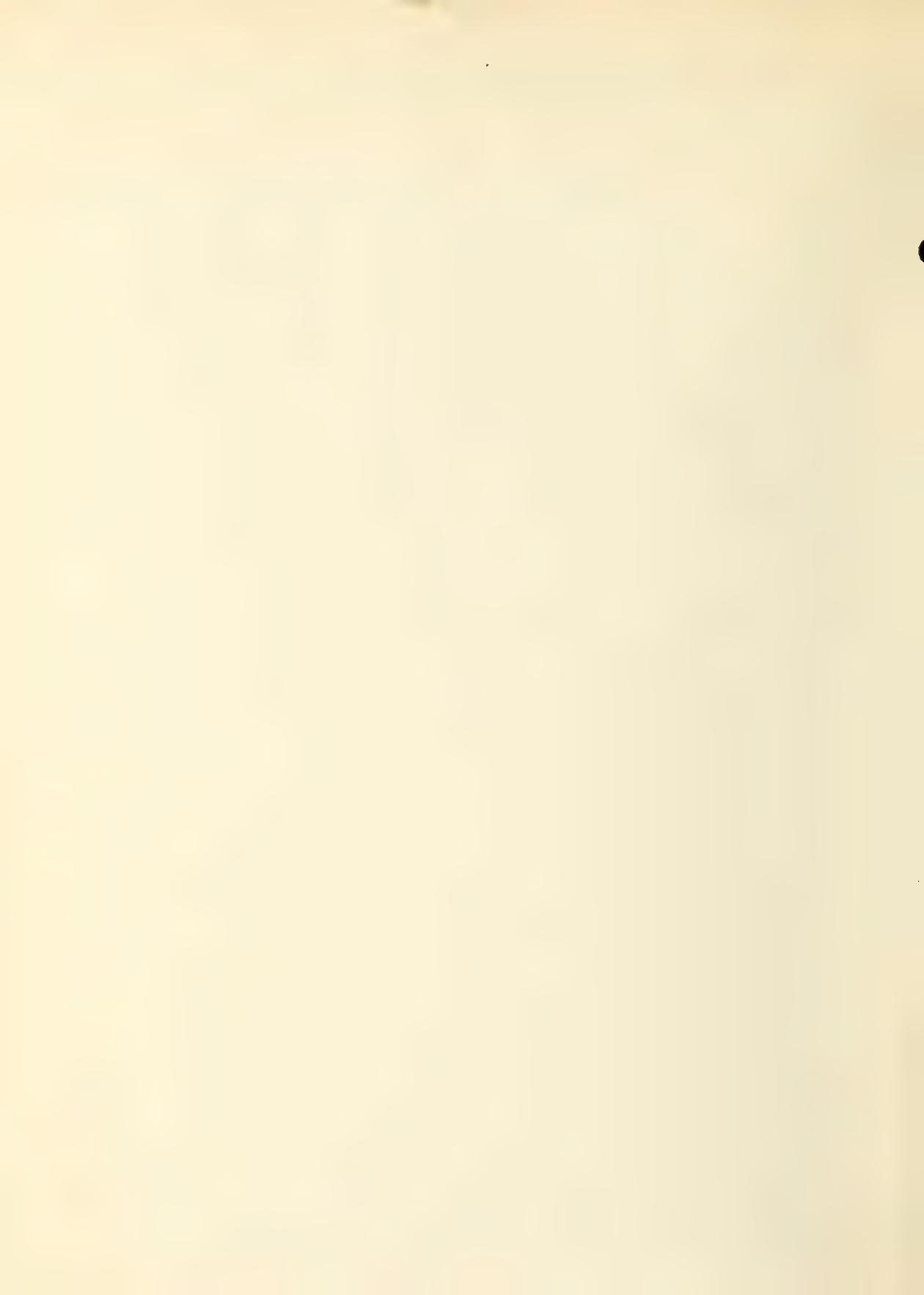


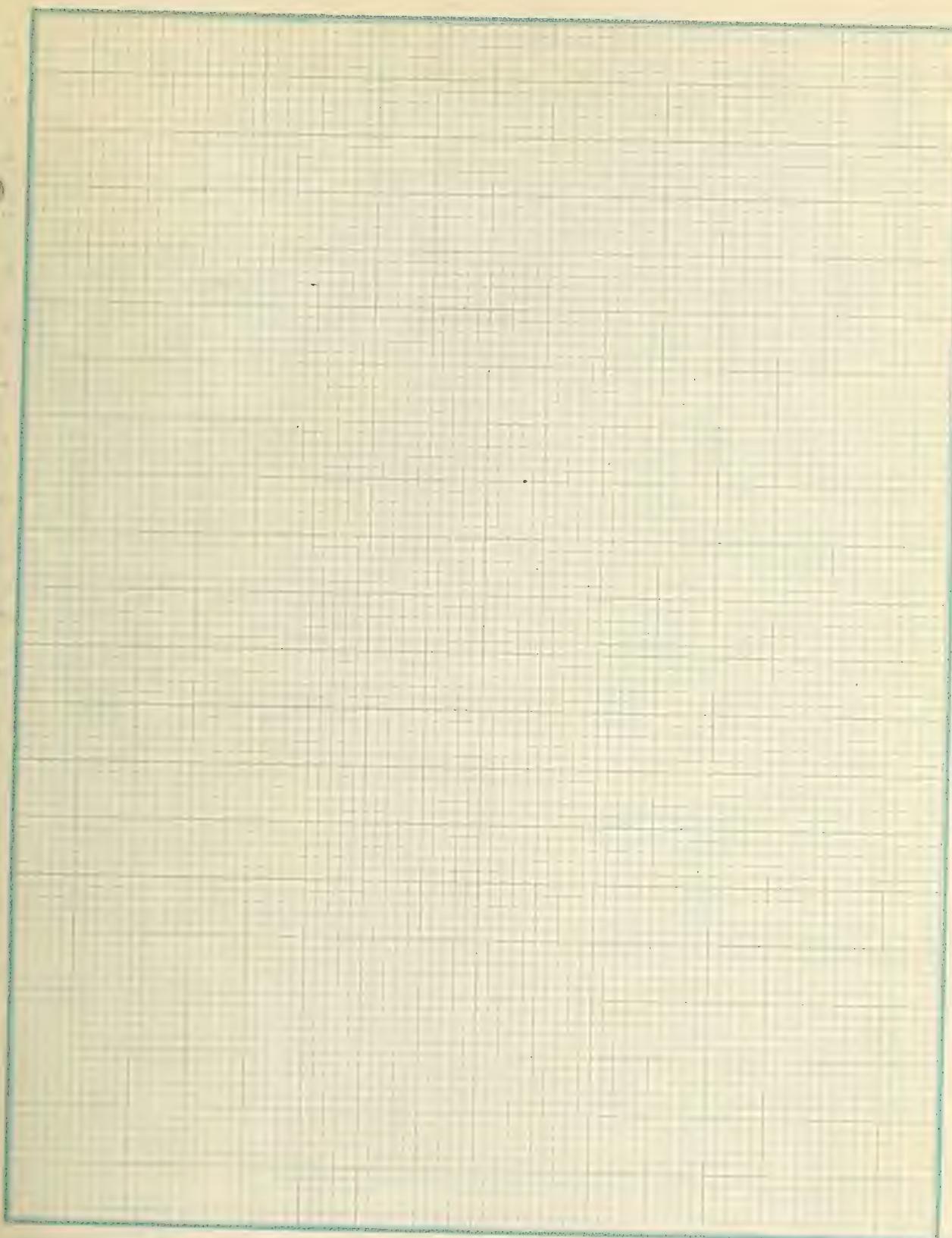


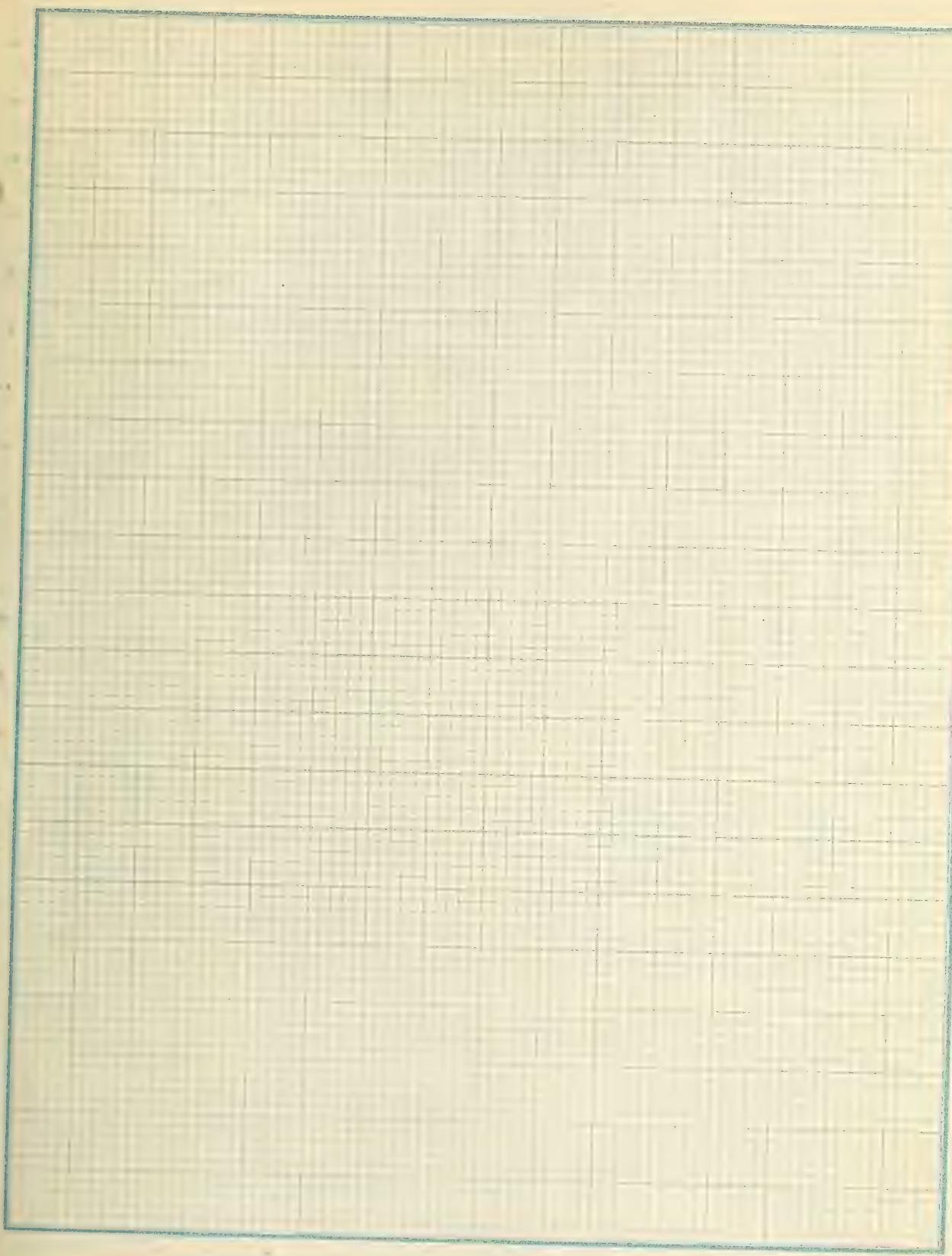


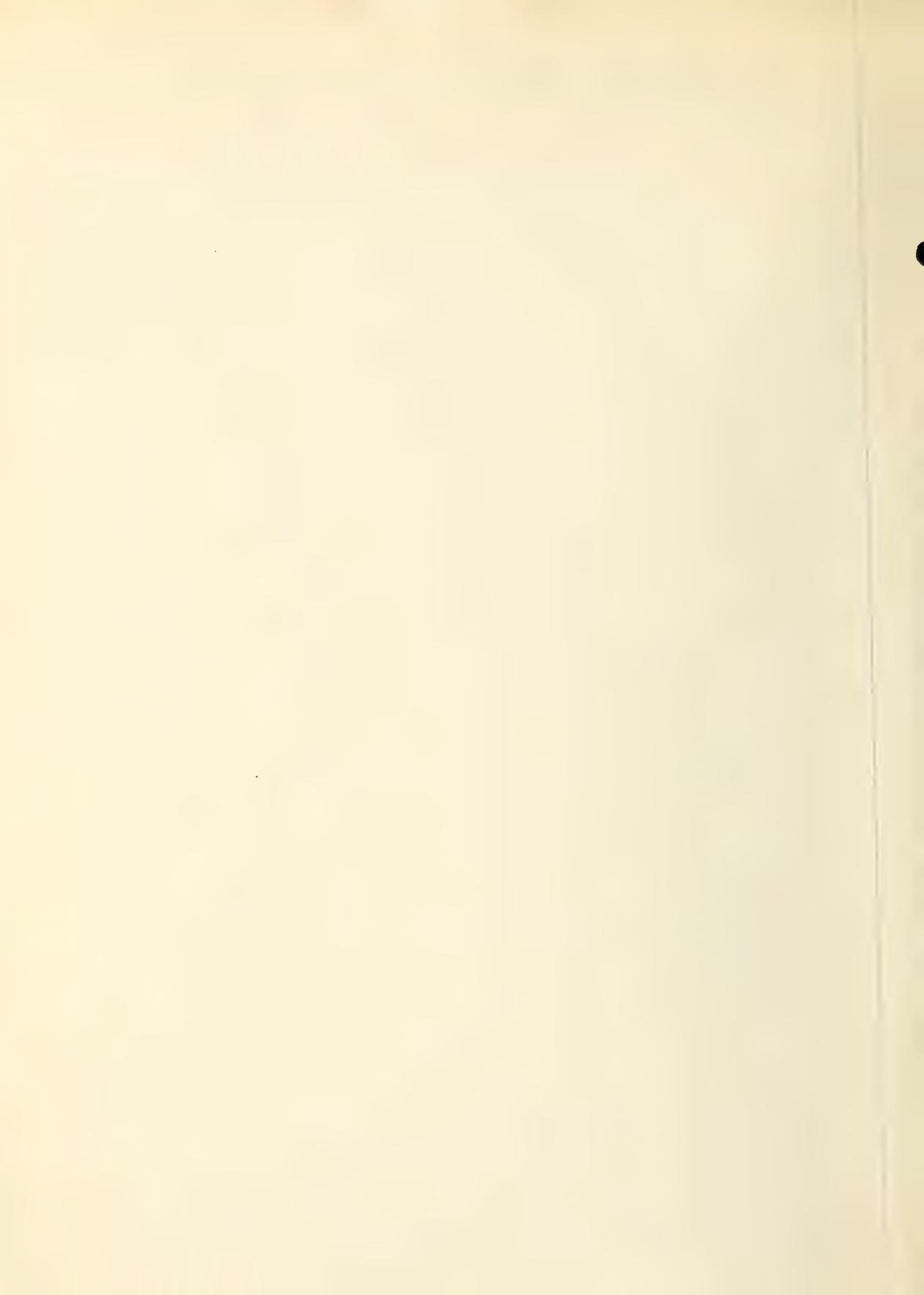


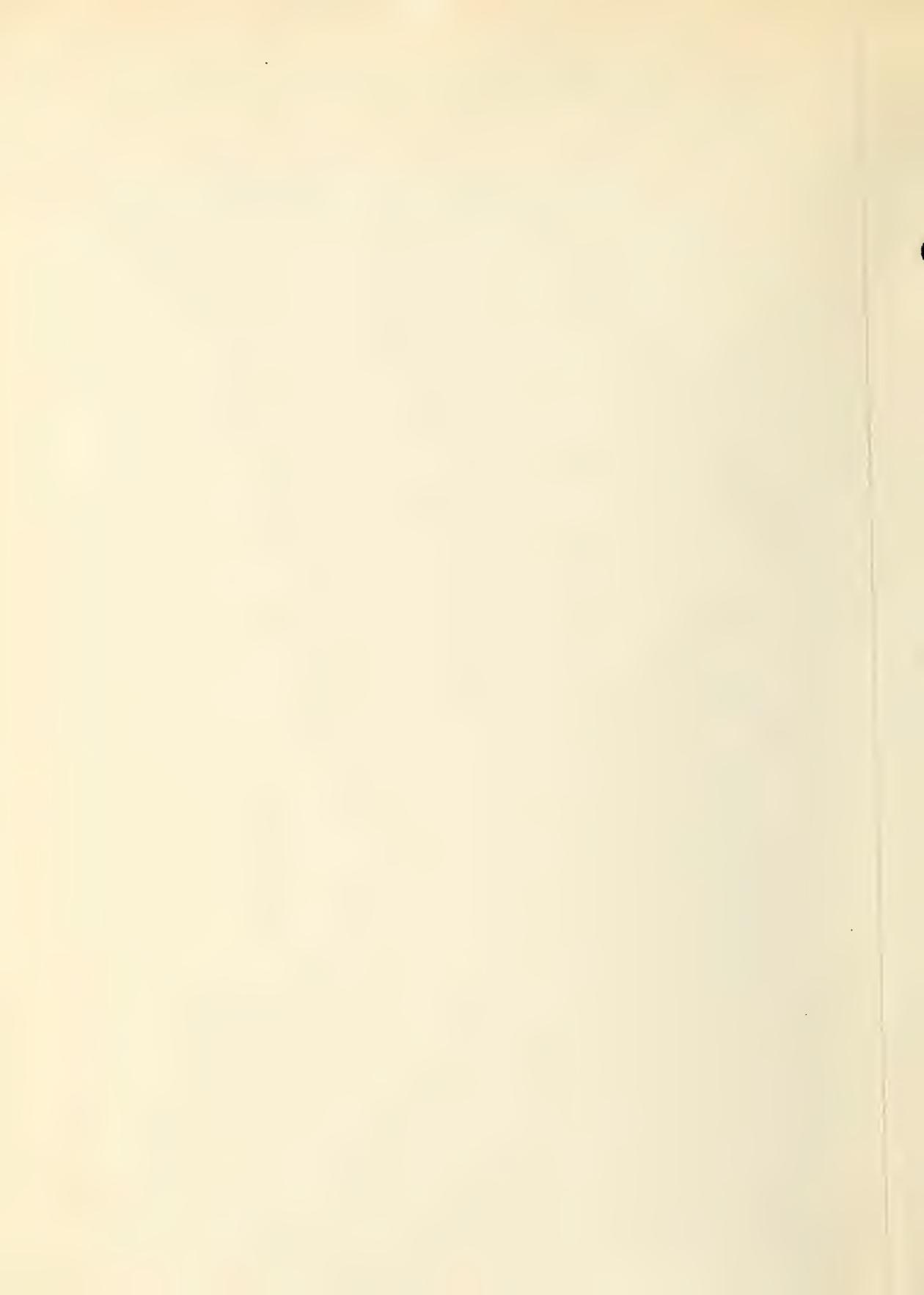


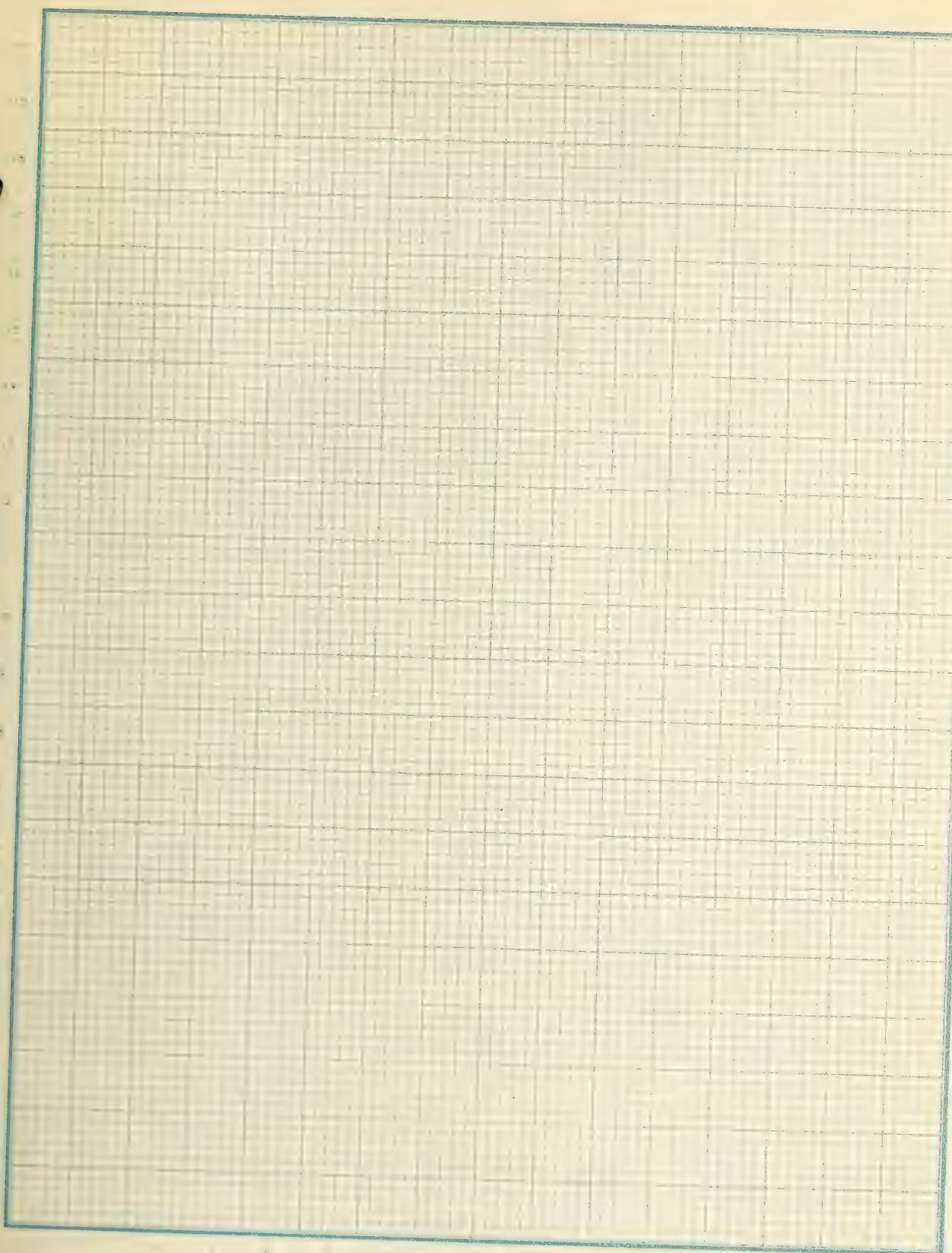


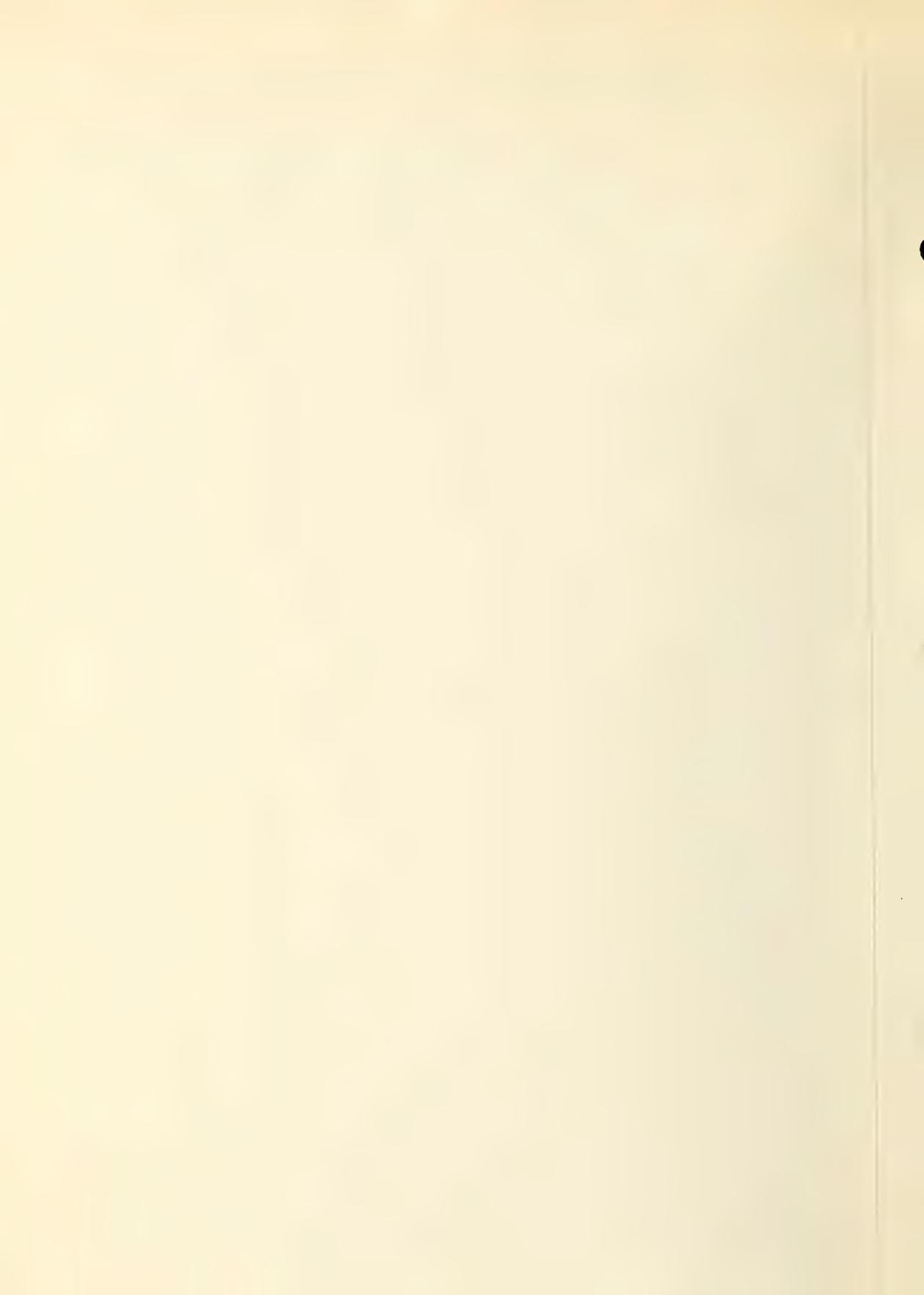


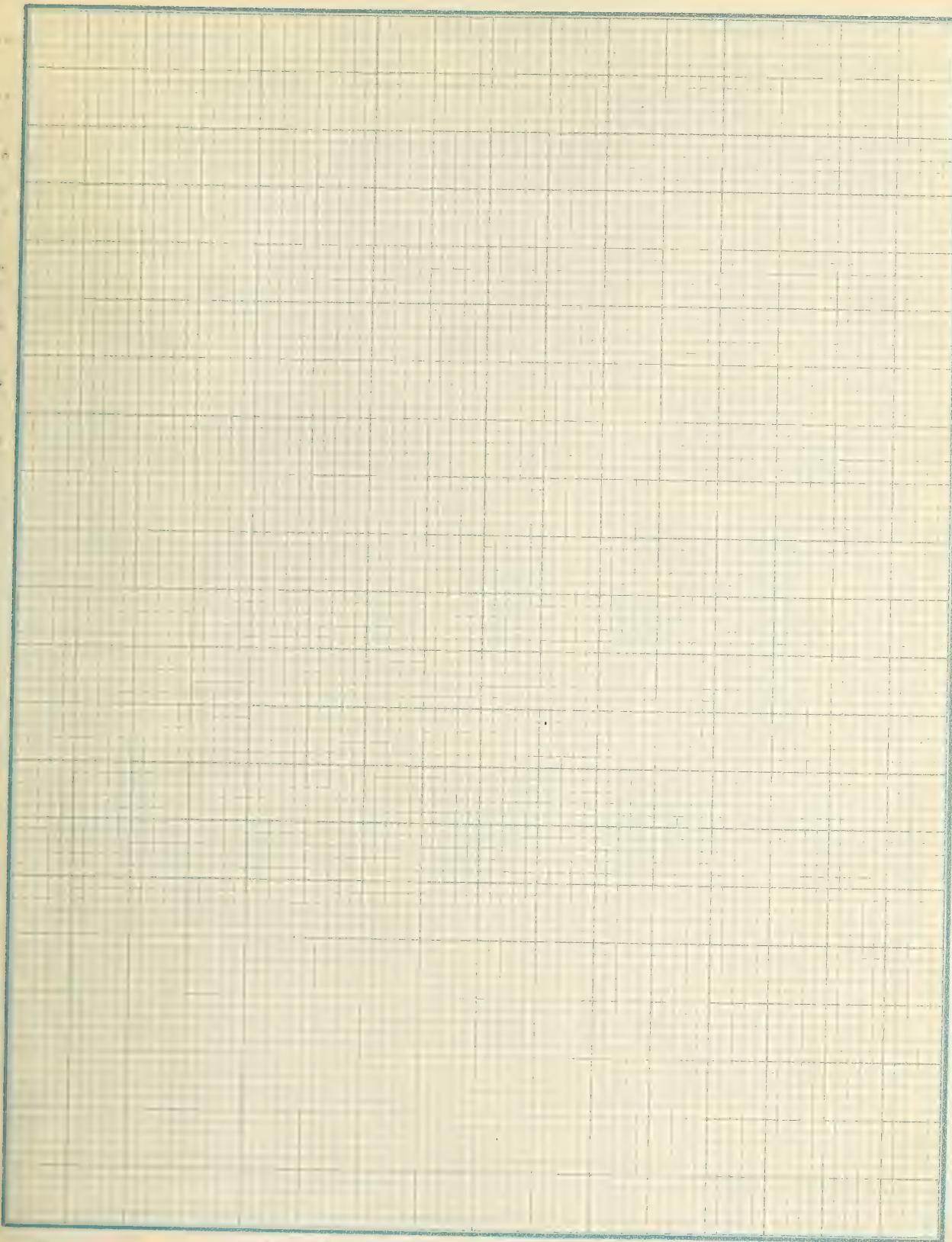


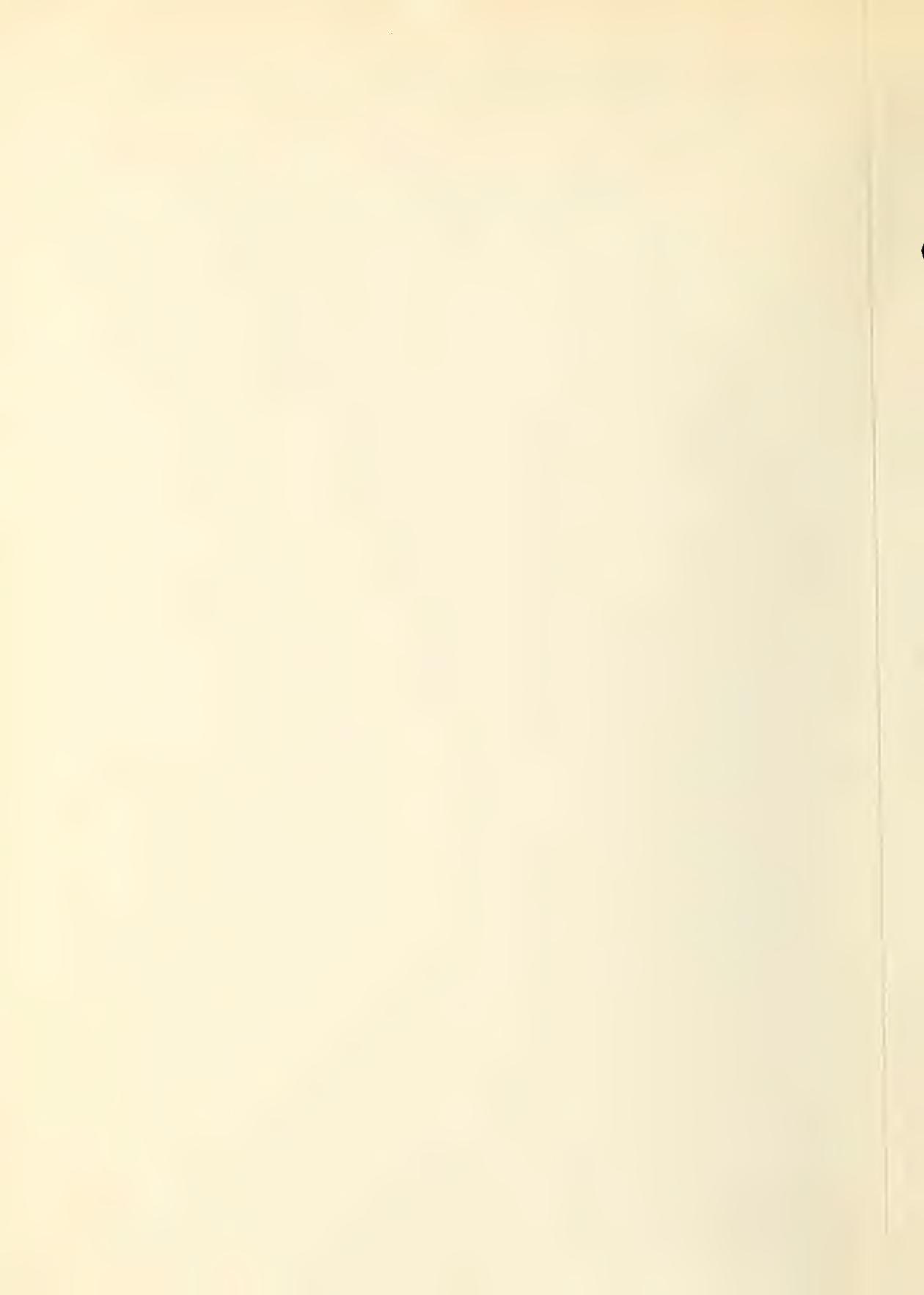


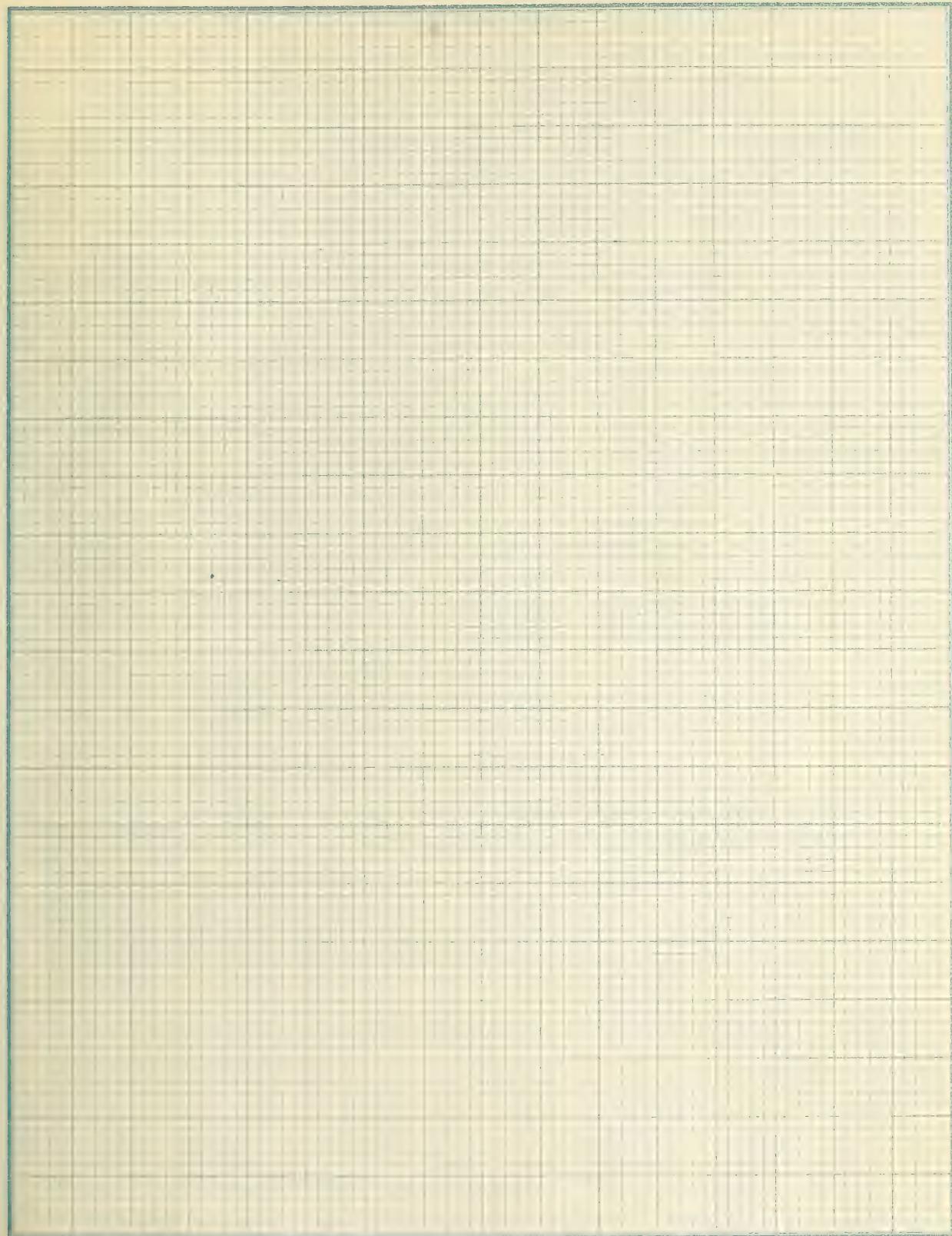


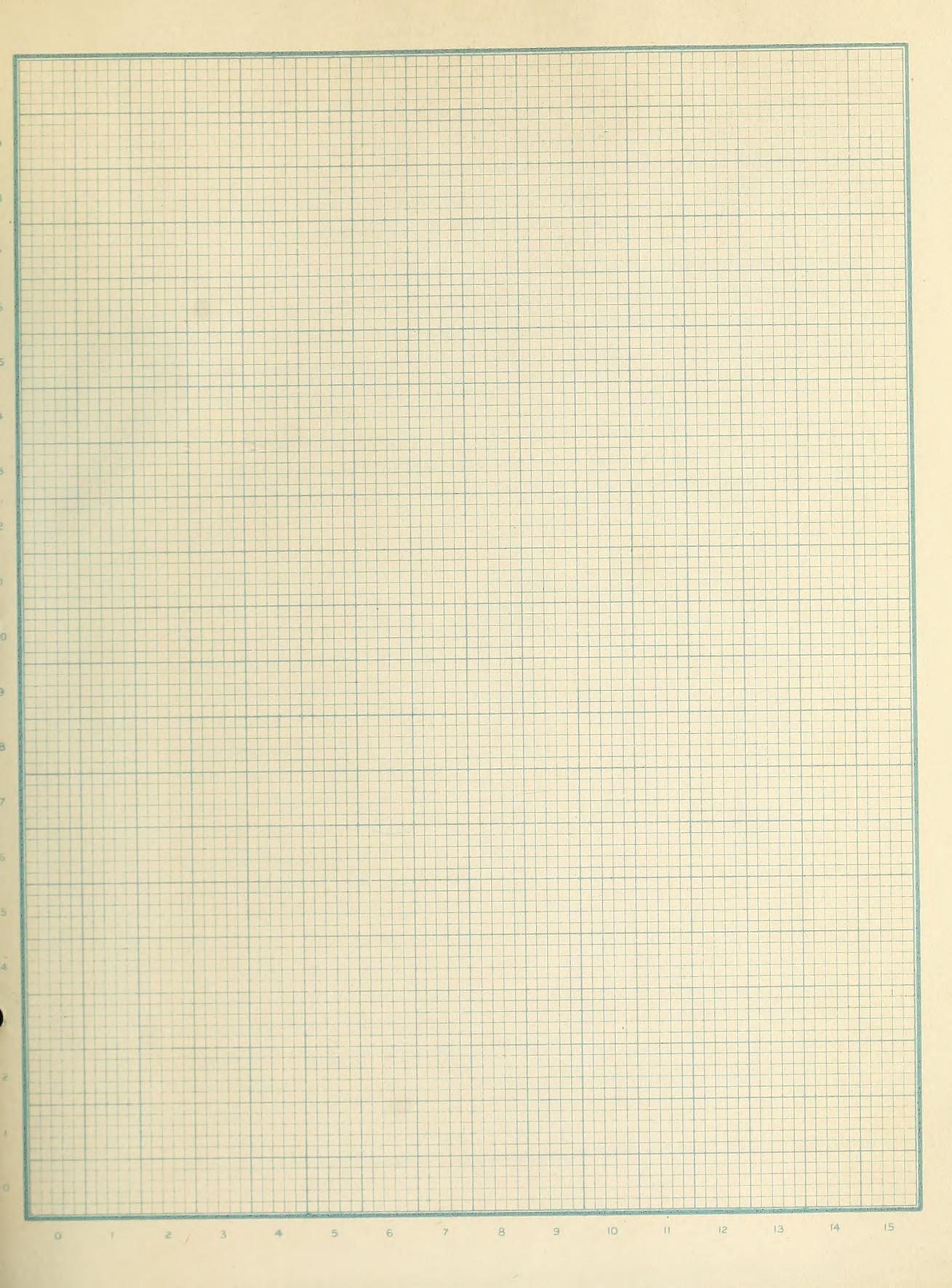












look better, and contain a more comprehensive and connected view of the whole subject, which is more useful for the purposes of review; but it should be remembered that the pupil gains power not by committing to memory notes, but by putting forth effort in the endeavor to grasp the principles of the subject and to give expression to them in his own language.

The exercises should be examined by the teacher, corrected and, if necessary, re-written by the student. This method involves considerable work, but the best teachers insist that the highest results cannot be attained apart from this careful examination and correction of exercises. The object of this book is to reduce the time required for it to a minimum.

The exercises are written on the sheets supplied in the pad, and when approved by the teacher are inserted in the covers and preserved. The sheets may at any time be removed, re-arranged, and grouped under appropriate headings.

The sides of the sheets in ordinary ruling are to be used for the descriptions of the experiments and for noting facts gleaned from text-books and lectures, while the opposite sides, ruled in cross-section form, are used for making drawings to scale and for plotting curves. Outline or sectional drawings, with little or no perspective, will usually for most purposes be found to be the best. The accompanying figure taken from the revised edition of the High School Physical Science illustrates the character of such drawings.

